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OM nucleic - nucleic search, using sw model

Run on: March 5, 2004, 16:40:19; Search time 6893 Seconds

(without alignments)

11343.513 Million cell updates/sec

Title: US-09-668-314C-1

Perfect score: 1804

Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 3470272 seqs, 21671516995 residues

Total number of hits satisfying chosen parameters: 6940544

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database: GenEmbl:*

1: qb ba:*

2: gb_htg:*

3: gb_in:*

4: gb_om:*

5: gb_ov:*

6: gb_pat:*

7: gb_ph:*

8: gb_pl:*

9: gb pr:*

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16: em fun:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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5	1804	100.0	1804	6	AX573821	AX573821 Sequence
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7	1790.6	99.3	2990	9	AF178532	AF178532 Homo sapi
8	1788.2	99.1	1885	9	AF200192	AF200192 Homo sapi
9	1784.4	98.9	1879	6	AX376004	AX376004 Sequence
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13	1768.2	98.0	1873	6	AR411231	AR411231 Sequence
14	1768.2	98.0	1873	9	AF117892	AF117892 Homo sapi
15	1765.6	97.9	1862	6	AR136909	AR136909 Sequence
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ALIGNMENTS

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VERSION
            BD235885.1 GI:33045655
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            JP 2002526081-A/1.
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            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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REFERENCE
            1 (bases 1 to 1804)
  AUTHORS
            Gurney, M.E., Bienkowski, M.J., Heinrikson, R.L., Parodi, L.A. and
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  TITLE
            Alzheimer's disease secretase
  JOURNAL
            Patent: JP 2002526081-A 1 20-AUG-2002;
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Qу		GTAGACAACCT	GCAGGGGGAC	CTCTGGC	CGCGGCTA	CTACCT	GGAGATG	CTGATCO	GGACC	
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REFERENCE
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 AUTHORS
         Gurney, M.E., Bienkowski, M.J., Heinrikson, R.L., Parodi, L.A. and
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  AUTHORS
          Gurney, M.E., Bienkowski, M.J., Heinrikson, R.L., Parodi, L.A. and
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  TITLE
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         Gurney, M. and Bienkowski, M.J.
         Alzheimer's disease secretase, app substrates therefor, and uses
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ACCESSION
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REFERENCE
 AUTHORS
         Gurney, M. and Bienkowski, M.J.
 TITLE
         Alzheimer's disease secretase, app substrates therefor, and uses
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            Membrane-anchored aspartyl protease with Alzheimer's disease
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Db	301		360
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Qу	1801 2	AAAA 1804

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RESULT 7
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LOCUS
            AF178532
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DEFINITION
           Homo sapiens aspartyl protease (BACE2) mRNA, complete cds.
ACCESSION
            AF178532
VERSION
            AF178532.1 GI:6851265
KEYWORDS
SOURCE
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REFERENCE
               (bases 1 to 2990)
  AUTHORS
            Solans, A., Estivill, X. and de La Luna, S.
            A new aspartyl protease on 21q22.3, BACE2, is highly similar to
  TITLE
            Alzheimer's amyloid precursor protein beta-secretase
  JOURNAL
            Cytogenet. Cell Genet. 89 (3-4), 177-184 (2000)
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   PUBMED
            10965118
REFERENCE
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               (bases 1 to 2990)
            Solans, A., Estivill, X. and de la Luna, S.
  AUTHORS
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            Direct Submission
  JOURNAL
            Submitted (18-AUG-1999) Medical and Molecular Genetics Center, IRO,
            Avia. Castelldefels Km 2,7, L'Hospitalet de Llobregat, Barcelona
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ORIGIN

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Q	7	1	ATGG	GCGCA	CTG	CCCG	GG	CGC'	rgc:	rgcī	GCCT	CTG	TGG	CCC	AGTGG	CT	CCTG	CGCGCC	: 60
Dł	•	464	ATGG	GCGCA	CTGC	CCCG	ĠĠ	CGC:	rgci	rgcī	GCCT	CTGC	TGG	CCC	 CCAGTGG		CCTG	CGCGCC	523
Q5	7	61	GCCC	CGGAG	TGG	GCCC	CGC	CGC	CCTT	CAC	GCTG	ccc	TCC	GGGT	GGCC	GC	GCC	ACGAAC	120
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Db	, ,	704	GTAG	GTAGACAACCTG		AGGG	GGA	CTC	III TGG	CCG	IIII CGGC'	IIII FACT	ACCI	 GGAGAT		III CTG	ATC	 GGGACC	763
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Qу	. 3	361	ACCC	CGCACT	CCT	ACATA	\GA	CAC	GTA	CTT	rgacz	ACAG.	AGAG	GTC	TAGC	ACA	TACC	GCTCC	420
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Qу	5	41	TTTGA	ATCAG	AGA	ATTTC	TT'	TTT	GCC'	TGG	ATTA	AAT	GGAA	TGG	ATA	CTT	GGCC	TAGCT	600
Db	10	04	TTTGA	 ATCAG	AGA	ATTTC	TT'	$\mathbf{T}\mathbf{T}\mathbf{T}$	GCC'	TGGG	ATTA	AAT	GGAA	TGG2	ATAC	III CTT	GGCC	TAGCT	1063
QУ	6	01	TATGO	CACAC'	rtg	CCAAG	CC	ATC.	AAG'	TTCT	CTGG	AGA	CCTT	CTT	CGACT	CC	CTGG	TGACA	660
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Qу	6	61	CAAGO	AAACA:	rcco	CCAAC	GT:	rtt(CTC	CATO	CAGA	TGT	STGG.	AGC	CGGCI	TG	CCCG'	TTGCT	720
Db	11	24	CAAGC	AAACA	CCC	CCAAC	i i GT:	III PTT(III CTC	CATG	CAGA	IIII TGTO	TGG.	IIII AGCO	CGGCI	TG	IIII CCCG'	IIIII TTGCT	1183
Qу	7	21	GGATC	TGGGA	CCAZ	ACGGA	.GG';	rag:	rct:	rgtc	TTGG	GTG0	SAAT'	TGA <i>I</i>	ACCAA	GT:	TTGT	ATAAA 	780

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QУ	901	ATCGTGGACAGTGGCACCACGCTGCTGCCCCCAGAAGGTGTTTGATGCGGTGGTC	960
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QУ	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	: 1020
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DEFINITION Homo sapiens memapsin 1 mRNA, complete cds.
ACCESSION
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VERSION
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REFERENCE
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 AUTHORS
           Lin, X., Koelsch, G., Wu, S., Downs, D., Dashti, A. and Tang, J.
 TITLE
           Human aspartic protease memapsin 2 cleaves the beta-secretase site
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  JOURNAL
           Proc. Natl. Acad. Sci. U.S.A. 97 (4), 1456-1460 (2000)
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REFERENCE
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 AUTHORS
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 TITLE
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ORIGIN

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	Matches	180	01,	;	Cc	ns	er	vat	tiv	ve								he	s		3;		Inc	del	s		1;		Gaps		1;
Q	У					11		$ \cdot $			+1	11	11			11	11		\square	11	1.1	Ш	111	1.1	11	1.1	111	1.1	GCGC		
D	b	78	3 7	ATC	GGG	CG	CAC	CTC	GG(CCC	GG	GC	CGC	т	GCI	'GC	TG	CC'	rcī	'GC	TG	GC(CCA	GT	ĠĠ	CT	CCT	ĠĊ	GCGCC	: :	137
Q	У	61	L G	GCC !	CCC	GG.	AGC	CTO	GGC 	CCC	CC	:GC	GC II	CC	CTI	'CA	.CG	CT	GCC	CCC	TC	CGO	GGI	'GG	CCC	GC(GGC	CA	CGAAC	: 1	120
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Q <u>r</u>	7	181	. G	GCG	CT	CG(CCC	TG	GA	GC	СТ	GC II	CC	TG	GC	GT	CC	CCC	CGC	GG	GCG	GCC	GC	CA	ACI	TC	CTTC	3G(CCATG	2	240
Dł)	258	G	cc	CT	ĊĠŒ	ccc	TG	GΑ	.GC	CT	GC	СĊ	ΤG	GC	GT:	CC	CCC	GC	GG	GCG	CC	:GC	CA	ACI	TC:	TTC	I I GC	CCATG	3	317
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Q3	7	301	C	CC	CC	GC <i>F</i>	\GA	AG	СТ	AC.	AG	AT'	TC'	TC	GT	TG	AC2	ACI	'GG.	AΑ	GCA	GT	AΑ	CT	ГТG	;CC	GTC	GC	CAGGA	3	60
Dk	•	378	Ċ	cc	CC	GCF	ιGΑ	AG	CT	AC.	AG2	AT'	TC'	TC	GT'	TG/	ACZ	ACT	GG.	I I AA	GCA	ιι .GT	II AA	II CTI	l I I FTG	CC	III GTG	I I GC	 CAGGA	4	37
QΣ	7	361	A	CC	CC	GCA	CT	CC	TA	CA'	TA(GA(CA	CG	TA	CT?	гтс	GAC	AC.	AG	AGA	.GG	TC'	ΓAC	3CA	.CA	TAC	CG	CTCC	4	20
Db	•	438	A	.CC	cc	GCA	CT	CC'	TA	CA'	I I TA	GACACG			TA:	CTTTGAC		AC	 ACAGAGAG		GG.	 GGTCTAGCAG			 CATACCGO			CTCC	4	97	
Qy	•	421	A.	AG(GG(CTT	TG.	AC	GT:	CA	CAC	ST(GA/	AG'	TA	CAC	CAC	CAA	.GG/	AA	GCT.	GG	AC	GGG	CT	тc	GTT	GG	GGAA	4	80
Db		498	A	AG	GG(CTT	TG.	AC:	GT	CA	CAC	II ST(TGAAGT <i>i</i>			ACACACAA		II GGZ	 GGAAGCT(II GG	 GGACGGGCT		II SCT	TC	 GTT	l I GG	 GGAA	5	57	
Qу		481	Gž	AC(CTO	CGT	CA	CC	AT(CC	CCA	\AA	AGO	GC:	rT(CAZ	ΑTA	ACT	TC	rti	TC	$_{ m TT}$	GT	CAA	ACA	TT	GCC	AC	TATT	5	40
Db		558	G	AC(CTC	GT	CA	CC	AT(CC	CCF	I AAZ	AG(II GC:	II TT	CAP	$\Lambda T \mathcal{F}$	I I ACT	TC:	rri CTi	TC'	l l TT	ii GT		II ACA'		GCC.	l I AC	 TATT	6	17
Qу		541	T'	TTC	GA.	ATC	AG	AGZ	AA:	rT7	CI	TT'	rri	ľG	CCI	ľGG	GA	ATT.	AAZ	ATC	GA.	ΑT	GG/	ΙΑ	'AC'	TT(GGC	CT.	AGCT	6	00
Db		618	T:	TTC	3A.	ATC.	AG	II AGZ	AA:	rT7	CI	ו ו נידי	l I I L'T'I	G G	CCI	GG GG	I I GA	II TT.	AA.	ATC	II GA	l I AT	 GGZ	l I TA			 GGC	H CT.	AGCT	6	77
Qу		601	TI	ATO	GCC	AC.	AC.	гтс	GC	CAZ	\GC	CZ	ATC	ΆZ	AGI	TC	TC	TG	GAG	SAC	CT	rc'	ГТC	GA	CT	CC	CTG	GT	GACA	66	60
Db	(678	\mathbf{T}^{I}	ATO	GCC	AC.	ACI	II FTC	GC(CAA	AGC	I I C <i>P</i>	I I ATC	A.	AGT	TC	TC	TG	III GAC	I I SAC	CT	rc:	l I I	 GA	ll CT	1 CC(CTG	 GT:	 GACA	73	37
Qу	•	661	CZ	AAG	SC.P	AA	CAI	rcc	ccc	CAA	ACG	ΤТ	TT	'C'1	rcc	AT	GC	AG	AΤC	TG	TG	GΑ	GCC	:GG	CT	rgo	ccc	GT'	IGCT	72	20
Db	•	738	C F	AAG	I I	II AA	II CAI			L I I	I I	l I TT		l l CT	rcc	۱۱ TA:	GC	 AG	ATC		 TG0		3CC	۱۱ GG:	l I CTI	l I rg(111 111		 GCT	79	97

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QУ	781 GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA 840
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Qу
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ACCESSION
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VERSION
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KEYWORDS
SOURCE
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 ORGANISM
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         Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE
 AUTHORS
         Baker, K.P., Chen, J., Desnoyers, L., Goddard, A., Godowski, P.J.,
         Gurney, A.L., Pan, J., Smith, V., Watanabe, C.K., Wood, W.I. and
         Zhang, Z.
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 JOURNAL
         Genentech, Inc. (US)
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VERSION
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            Clark, H.F., Gurney, A.L., Abaya, E., Baker, K., Baldwin, D., Brush, J.,
  AUTHORS
            Chen, J., Chow, B., Chui, C., Crowley, C., Currell, B., Deuel, B.,
            Dowd, P., Eaton, D., Foster, J., Grimaldi, C., Gu, Q., Hass, P.E.,
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  TITLE
            The Secreted Protein Discovery Initiative (SPDI), a Large-Scale
            Effort to Identify Novel Human Secreted and Transmembrane Proteins:
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  JOURNAL
            Genome Res. 13 (10), 2265-2270 (2003)
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            Clark, H.F.
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            Direct Submission
 JOURNAL
            Submitted (01-AUG-2003) Department of Bioinformatics, Genentech,
            Inc., 1 DNA Way, South San Francisco, CA 94080, USA
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VERSION
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REFERENCE
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  AUTHORS
            Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
            Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
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 JOURNAL
           Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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 AUTHORS
           Strausberg, R.
           Direct Submission
 TITLE
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Qу

REMARK

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            DNA Sequencing by: Genome Sequence Centre,
            BC Cancer Agency, Vancouver, BC, Canada
            info@bcqsc.bc.ca
            Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield,
            Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin,
            Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo
            Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven
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QУ		CCCCGCAGAAGCTACA	GATTCTCGT'	TGACACTGO	SAAGCAG'	ℙÅÅ℮ͲͲͲϾϲ	ירכיייבר ירביייבר	CACCA	
Db			1 1 1 1 1 1 1 1 1	1 1 3 1 1 1 1 1	11111		11111	1 1 1 1 1	
Qу	361	ACCCCGCACTCCTACAT	AGACACGTA	CTTTGACAC	CAGAGAG	STCTAGCAC	ATACC	GCTCC	420
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QУ	421	AAGGGCTTTGACGTCAC.	AGTGAAGTAC	CACACAAGG	SAAGCTGG	SACGGGCTT	CGTTG	GGGAA	480
Db			1 1 1 1 1 1		111111		TILLE.		
Qу	481	GACCTCGTCACCATCCC	CAAAGGCTTC	CAATACTTC	TTTTCTT	GTCAACAT	TGCCAC	TATT !	540
Db	571		CAAAGGCTTC	 AATACTTC	 TTTTCTT	 GTCAACAT	 TGCCAC	 TATT (630
QУ	541	TTTGAATCAGAGAATTT	CTTTTTGCCT	'GGGATTAA	ATGGAAT	GGAATACT'	TGGCCI	'AGCT (500
Db				11111111	3 1 1 1 1 1 1	11111111			
Qу	601 '	TATGCCACACTTGCCAAC	CCATCAAGT	TCTCTGGA	GACCTTC	ጥጥሮርል ርጥሮሪ	COUCCO	CACA	
Db		TATGCCACACTTGCCAAG		1111111	111111	1111111		1.1.1.1	
Qу	661 (CAAGCAAACATCCCCAAC	GTTTTCTCC.	ATGCAGAT(GTGTGGA	GCCGGCTT(GCCCGT	TGCT 7	20

Db	751 CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT 810
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Db	1051 GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 1110
QУ	1021 CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC 1080
Db	
Qу	1081 TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC 1140
Db	
QΥ	1141 ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA 1200
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Qу	1201 TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC 1260
Db	1291 TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC 1350
QУ	1261 AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA 1320
Db	1351 AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA 1410
QУ	1321 GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT 1380
Db	
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Db	
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Db	
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Db	

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Qγ	1621	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1680
Db		AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1770
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Db	1771	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTGATTTTCAAGCTTTCAAATC 1740
Qу		CTCCCTACTTCCAAGAAAAATAATTAAAAAAA 1772
Db		

Search completed: March 5, 2004, 23:18:56 Job time: 6904 secs

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OM nucleic - nucleic search, using sw model

Run on: March 5, 2004, 16:24:13; Search time 701 Seconds

(without alignments)

10932.595 Million cell updates/sec

Title: US-09-668-314C-1

Perfect score: 1804

Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 3373863 seqs, 2124099041 residues

Total number of hits satisfying chosen parameters: 6747726

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100%

Listing first 45 summaries

Database: N G

N_Geneseq_29Jan04:*

1: geneseqn1980s:*

2: geneseqn1990s:*

3: geneseqn2000s:*

4: genesegn2001as:*

5: geneseqn2001bs:*

6: geneseqn2002s:*

7: geneseqn2003as:*

8: geneseqn2003bs:*

9: geneseqn2003cs:* 10: geneseqn2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		8				
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No.	Score	Match	Length	DB 	ID	Description
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2	1804	100.0	1804	4	AAS11701	Aas11701 DNA encod
3	1804	100.0	1804	4	AAD17864	Aad17864 Human asp
4	1804	100.0	1804	4	AAD13020	Aad13020 Human asp
5	1804	100.0	1804	4	AAD06738	Aad06738 Human asp
6	1804	100.0	1804	4	AAS11516	Aas11516 Human cDN
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1879 3 AAC78500
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ALIGNMENTS

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XX
AC
     AAA15661;
XX
DT
     03-AUG-2000 (first entry)
XX
DE
    Human aspartyl protease 1 (Asp1) nucleotide sequence.
XX
KW
     Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 1;
KW
     Alzheimer's disease; beta secretase site; ss.
XX
OS
     Homo sapiens.
```

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XX
 PN
     W0200017369-A2.
XX
 PD
     30-MAR-2000.
XX
PF
     23-SEP-1999:
                   99WO-US020881.
XX
PR
     24-SEP-1998;
                   98US-0101594P.
XX
PA
     (PHAA ) PHARMACIA & UPJOHN CO.
XX
PΙ
     Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
DR
     WPI; 2000-303209/26.
DR
     P-PSDB; AAY88424.
XX
     New enzyme designated human aspartase useful in research into Alzheimer's
PT
     Disease is capable of cleaving amyloid protein precursor at the beta
PΤ
PT
     secretase site to produce amyloid beta peptide.
XX
PS
     Claim 11; Fig 1; 183pp; English.
XX
CC
     This sequence represents the human aspartyl protease nucleotide sequence.
     The invention relates to a protease capable of cleaving the beta
CC
CC
     secretase site of amyloid precursor protein (APP). The protease contains
CC
     a sequence encoding the amino acid sequence DTG and a sequence encoding
CC
     DSG or DTG separated by 100-300 amino acids. When mutated the APP gene
CC
     causes an autosomal dominant form of Alzheimer's disease. APP localises
     to the cell surface membrane and have a single C-terminal transmembrane
CC
     domain. Proteolytic processing of APP produces the amyloid beta protein,
CC
CC
     which is possibly very important in Alzheimer's disease. The invention
     includes a nucleotide sequence encoding the protease, a vector containing
CC
CC
     the nucleotide sequence, and a cell line comprising the vector. Methods
CC
     for screening for inhibitors of beta secretase activity are also given in
CC
     the invention. The human aspartase protein and nucleotide sequences and
     the methods for identifying inhibitors of the protease, are useful in the
CC
     treatment of and research in to Alzheimer's disease
CC
XX
     Sequence 1804 BP; 397 A; 520 C; 458 G; 429 T; 0 U; 0 Other;
SQ
  Query Match
                        100.0%; Score 1804; DB 3; Length 1804;
  Best Local Similarity
                        100.0%; Pred. No. 0;
 Matches 1804; Conservative
                              0; Mismatches
                                                0;
                                                   Indels
                                                             0:
                                                                Gaps
                                                                        0;
Qу
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             Db
           1 ATGGGCGCACTGGCCCGGGCGCTGCTGCTGCTGCTGCCCCAGTGGCTCCTGCGCGCC 60
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Qy
             Db
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Qу
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Db
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Qy
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(2y 481	GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT	540
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I	0b 541	TTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCT	600
Ç	2y 601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
Ι	0b 601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
Ç	9y 661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT	720
Ι	0b 661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCT	720
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Db	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT	1380
Qу	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1440
Db	1381		1440
QУ	1441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC	1500
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QУ	1501	CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA	1560
Db	1501		1560
Qу	1561	GCCAGGCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC	1620
Db	1561		1620
Qу	1621	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT	1680
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Db	1801	 AAAA 1804	

RESULT 2 AAS11701

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      AAS11701;
XX
 DT
      24-OCT-2001
                   (first entry)
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DΕ
      DNA encoding human aspartyl protease 1 (Asp-1).
XX
KW
     Human; aspartyl protease 1; Asp-1; nootropic; neuroprotective;
      aspartyl protease 2; Asp2; amyloid protein precursor; APP;
KW
KW
     beta-secretase; Alzheimer's disease; ds.
XX
OS
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XX
FH
     Key
                      Location/Qualifiers
FT
     CDS
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FT
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FT
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XX
     W0200149097-A2.
PN
XX
PD
     12-JUL-2001.
XX
     09-MAY-2001; 2001WO-IB000797.
PF
XX
PR
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XX
     (BIEN/) BIENKOWSKI M J.
PA
PΑ
     (GURN/) GURNEY M E.
     (HEIN/) HEINRIKSON R L.
PΑ
PA
     (PARO/) PARODI L A.
     (YANR/) YAN R.
PA
XX
PΙ
     Bienkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;
XX
DR
     WPI; 2001-502548/55.
DR
     P-PSDB; AAU07201.
XX
РΤ
     Novel purified polypeptide comprising fragment of mammalian aspartyl
РΤ
     protease 2, lacking Asp2 transmembrane domain and retaining beta
РΤ
     secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT
     activity.
XX
PS
     Example 2; Fig 1; 185pp; English.
XX
CC
     The invention relates to a novel purified polypeptide comprising a
CC
     fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
     Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC
     and the fragment retain the beta-secretase activity of the mammalian Asp2
CC
CC
     protein. Also included is an isoform of amyloid protein precursor (APP)
CC
     comprising the amino acid sequence of a APP or its fragment containing an
CC
     APP cleavage site recognisable by a mammalian beta-secretase, and further
CC
     comprising two lysine residues at the carboxyl terminus of the amino acid
CC
     sequence of the mammalian APP or APP fragment. The polypeptides are used
CC
     for assaying for modulators of beta-secretase activity; identifying
CC
     agents that inhibit the APP processing activity of human Asp2 aspartyl
CC
     protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
```

```
; and for reducing cellular production of amyloid beta (Abeta) from APP.
CC
    Agents identified by the above methods are useful for treating
CC
    Alzheimer's disease; and for identifying modulators of amyloid-beta
CC
    (Abeta) peptide production, for use in designing therapeutics for the
    treatment or prevention of Alzheimer's disease. Probes and primers
CC
CC
    derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
    nucleic acids in in vitro assays and in Northern and Southern blots. The
CC
CC
    present sequence represents the coding sequence of human Asp-1
XX
    Sequence 1804 BP; 397 A; 520 C; 458 G; 429 T; 0 U; 0 Other;
SQ
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                     100.0%; Score 1804;
                                      DB 4; Length 1804;
  Best Local Similarity
                    100.0%; Pred. No. 0;
  Matches 1804; Conservative
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           Db
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           Db
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Qу
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Db	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
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Db	781	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA	840
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Db	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC	900
Qу	901	ATCGTGGACAGTGGCACCACGCTGCTGCCCCAGAAGGTGTTTGATGCGGTGGTG	960
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Db	1021	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC	1080
QУ	1081	TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC	1140
Db	1081	TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC	1140
QУ	1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA	1200
Db	1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA	1200
Qу	1201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC	1260
Db	1201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC	1260
QУ	1261	AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA	1320
Db	1261	AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA	1320
Qу	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT	1380
Db	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT	1380
Qy	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1440
Db	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1440
QУ	1441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC	1500
Db	1441	GCCATCCTCGTTGATCGTCCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC	1500

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Qу
           Db
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Qу
           1681 GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC 1740
Db
       Qу
           Db
       Qу
       1801 AAAA 1804
           I + I + I
Db
       1801 AAAA 1804
RESULT 3
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xx
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XX
DT
    10-DEC-2001 (first entry)
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XX
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    Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;
    Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KW
    amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;
KW
KW
    chromosome 21; ss.
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     23-SEP-1999;
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                   99WO-US020881.
     13-OCT-1999;
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                   99US-00416901.
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                   99US-0169232P.
     06-DEC-1999:
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     (PHAA ) PHARMACIA & UPJOHN CO.
XX
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     Bienkowkski MJ, Gurney M;
XX
DR
     WPI; 2001-444208/48.
DR
     P-PSDB; AAE10628.
XX
PT
     Polypeptide comprising fragments of human aspartyl protease with amyloid
PT
     precursor protein processing activity and alpha-secretase activity, for
PT
     identifying modulators useful in treating Alzheimer's disease.
XX
PS
     Claim 30; Fig 1; 187pp; English.
XX
CC
     The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC
     proteins which lack transmembrane domain or amino terminal domain or
     cytoplasmic domain and retains alpha-secretase activity and amyloid
CC
     protein precursor (APP) processing activity. The proteins of the
CC
     invention are useful for assaying hu-Aspl alpha-secretase activity, which
CC
     in turn is useful for identifying modulators of hu-Aspl alpha-secretase
CC
CC
     activity, where modulators that increase hu-Asp1 alpha-secretase activity
CC
     are useful for treating Alzheimer's disease (AD) which causes progressive
CC
     dementia with consequent formation of amyloid plaques, neurofibrillary
     tangles, gliosis and neuronal loss. Hu-Aspl protease substrate is useful
CC
     for assaying hu-Aspl proteolytic activity, by contacting hu-Aspl protein
CC
     with the substrate under acidic conditions and determining the level of
CC
     hu-Aspl proteolytic activity. The present sequence is a cDNA encoding
CC
CC
     human Asp1 protein. Asp1 gene is localised on chromosome 21
XX
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  Query Match
                        100.0%; Score 1804; DB 4; Length 1804;
  Best Local Similarity
                        100.0%;
                                Pred. No. 0;
 Matches 1804; Conservative
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                                                  Indels
                                                           0; Gaps
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             Db
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Qу
             Db
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Qу
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PF

22-SEP-2000; 2000GB-00023315.

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QУ	481	GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT 540
Db	481	GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT 540
Qу	541	TTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCT 600
Db	541	TTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCT 600
Qу	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA 660
Db	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA 660
QУ	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT 720
Db	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT 720
QУ	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA 780
Db		GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA 780
Qу	781	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA 840
Db		GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA 840
Qу		TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC 900
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Qу		ATCGTGGACAGTGGCACCACGCTGCGCCTGCCCCAGAAGGTGTTTGATGCGGTGGTG 960
Db		ATCGTGGACAGTGGCACCACGCTGCCCCCAGAAGGTGTTTGATGCGGTGGTG 960
QУ		GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 1020
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Db	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1440
Qу	1441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC	1500
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Qу	1501	CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA	1560
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Qу	1561	GCCAGGCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC	1620
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Qу	1621	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT	1680
Db	1621	AGCAGCCGGGATCGATGGCGCCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT	1680
QУ	1681	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC	L740
Db	1681	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC	L740
QУ	1741	CTCCCTACTTCCAAGAAAAAAATAATTAAAAAAAAAAACTTCATTCTAAACCAAAAAA	800
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Qу		AAAA 1804 	
Db		AAAA 1804	

RESULT 4 AAD13020

ID AAD13020 standard; cDNA; 1804 BP.

XX

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      23-OCT-2001 (first entry)
 XX
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      Human aspartyl protease 1 (Hu-Aspl) cDNA.
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 KW
      beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
 KW
      neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
 ΚW
      neuroprotective; antisense therapy; gene therapy; chromosome 21; ss.
 KW
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      Homo sapiens.
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     09-MAY-2001; 2001WO-IB000799.
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PR
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PA
PΑ
     (GURN/) GURNEY M E.
PA
     (HEIN/) HEINRIKSON R L.
PΑ
     (PARO/) PARODI L A.
PΑ
     (YANR/) YAN R.
XX
ΡI
     Bienkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;
XX
DR
     WPI; 2001-483072/52.
DR
     P-PSDB; AAE06858.
XX
PT
     Novel purified polypeptide comprising fragment of mammalian aspartyl
PT
     protease 2, lacking Asp2 transmembrane domain and retaining beta
PT
     secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT
     activity.
XX
PS
     Example 2; Fig 1; 185pp; English.
XX
CC
     The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC
     precursor protein (APP) isoforms and their corresponding DNA molecules.
     Human aspartyl proteases can act as beta-secretase proteases useful for
CC
CC
     treating Alzheimer's disease. APP isoforms are useful for identifying
CC
     modulators of amyloid-beta peptide production, for use in designing
CC
     therapeutics for the treatment and prevention of Alzheimer's disease,
     dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC
     and neuronal loss. APP isoforms are also used in methods for identifying
CC
```

```
inhibitors and modulators of human Asp2 activity. The invention relates
 CC
     to a method for identifying agents that modulate the activity of human
 CC
     aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
     as a means to screen in cellular assays for the inhibitors of beta- and
 CC
     gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
 CC
     polymerase chain reactions (PCR). The probes are useful for detecting Hu-
 CC
    Asp nucleic acids in in vitro assays and in Northern and Southern blots.
 CC
 CC
     The present cDNA sequence encodes human aspartyl protease 1 (Hu-Asp1). Hu
 CC
     -Asp 1 gene is localised on chromosome 21
 XX
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                     100.0%; Score 1804; DB 4; Length 1804;
  Best Local Similarity
                     100.0%; Pred. No. 0;
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                          0; Mismatches
                                         0; Indels
                                                    0; Gaps
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Qy
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Db
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Db
Qy
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Qу
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Qу	661 CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT 720
Db	
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DЬ	
Qу	781 GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA 840
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Qу	841 TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC 900
Db	
Qу	901 ATCGTGGACAGTGGCACCACGCTGCTGCGCCCAGAAGGTGTTTGATGCGGTGGTG 960
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QУ	1141 ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA 1200
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XX
DТ
    10-AUG-2001 (first entry)
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XX
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    Human; alpha-secretase; amyloid precursor protein; APP; therapy;
   Alzheimer's disease; antialzheimer's; aspartyl protease 1; Asp 1;
KW
KW
   beta-secretase; chromosome 21; ss.
XX
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XX
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     13-OCT-1999;
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 PR
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                  99US-0169232P.
XX
PΑ
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XX
PΙ
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XX
DR
     WPI; 2001-290516/30.
DR
     P-PSDB; AAE02580.
XX
PT
     Enzymes that cleave the alpha-secretase site of the amyloid precursor
     protein, useful for the treatment of Alzheimer's disease.
PT
XX
     Example 2; Fig 1; 189pp; English.
PS
XX
CC
     The present invention relates to enzymes for cleaving the alpha-
    secretase site of the amyloid precursor protein (APP) and methods of
CC
CC
     identifying those enzymes. The methods may be used to identify enzymes
     that may be used to cleave the alpha-secretase cleavage site of the APP
CC
CC
    protein. The enzymes may be used to treat or modulate the progress of
    Alzheimer's disease. The present sequence is human aspartyl protease 1
CC
     (Asp 1) cDNA. Asp 1 has alpha-secretase protease and beta-secretase
CC
CC
    protease activities. Asp 1 gene is located on chromosome 21
XX
    Sequence 1804 BP; 397 A; 520 C; 458 G; 429 T; 0 U; 0 Other;
SQ
  Query Match
                       100.0%; Score 1804; DB 4; Length 1804;
  Best Local Similarity
                       100.0%; Pred. No. 0;
  Matches 1804; Conservative
                             0; Mismatches
                                              0; Indels
                                                          0; Gaps
Qv
           1 ATGGGCGCACTGGCCGGGCGCTGCTGCTGCTGCTGGCCCAGTGGCTCCTGCGCGCC 60
            Db
           1 ATGGGCGCACTGGCCGGGCGCTGCTGCTGCTGCTGGCCCAGTGGCTCCTGCGCGCC 60
Qу
          61 GCCCCGGAGCTGGCCCCCGCGCCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAAC 120
            61 GCCCCGGAGCTGGCCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAAC 120
Db
         121 CGCGTAGTTGCGCCCACCCCGGGACCCCGGGACCCCTGCCGAGCGCCACGCCGACGCCTTG 180
Qу
            121 CGCGTAGTTGCGCCCACCCCGGGACCCGGGGACCCCTGCCGAGCGCCACGCCGACGGCTTG 180
Db
        181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCCAACTTCTTGGCCATG 240
Qy
            Db
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         241 GTAGACAACCTGCAGGGGGACTCTGGCCGGGCTACTACCTGGAGATGCTGATCGGGACC 300
Qу
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Db	24	
Qу	30	1 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
Db	30	
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Db	36:	
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Db	423	
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Db	481	
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Qу	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA 660
Db	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA 660
QУ	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT 720
Db	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT 720
Qу	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA 780
Db	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA 780
Qу	781	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA 840
Db		GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA 840
QУ	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC 900
Db		TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC 900
Qλ		ATCGTGGACAGTGGCACCACGCTGCTGCGCCTGCCCCAGAAGGTGTTTGATGCGGTGGTG 960
Db		ATCGTGGACAGTGGCACCACGCTGCTGCCCCCAGAAGGTGTTTGATGCGGTGGTG 960
QУ		GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 1020
Db		GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 1020
QУ		CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC 1080
Db		CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC 1080
Qу	1081	TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC 1140

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Db
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 Qу
          Db
       1141 ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA 1200
       1201 TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC 1260
Qу
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Db
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Qу
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Ov
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Qу
          Db
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Qy
      1561 GCCAGGCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC 1620
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Db
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         Db
      Qу
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      1801 AAAA 1804
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ID
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XX
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AC

XX

AAS11516;

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DT
      24-OCT-2001 (first entry)
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 XX
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      Human; Aspartyl protease; Asp1; Asp2; beta-secretase; nootropic;
 KW
      neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
      amyloid-beta; Abeta; ss.
 KW
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      Homo sapiens.
 XX
 FH
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                      Location/Qualifiers
 FT
      CDS
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 FT
                      /product= "Asp1"
XX
PN
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XX
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      12-JUL-2001.
XX
      09-MAY-2001; 2001WO-IB000798.
PF
XX
PR
      09-MAY-2001; 2001WO-IB000798.
XX
      (BIEN/) BIENKOWSKI M J.
PΑ
PA
      (GURN/) GURNEY M E.
PA
      (HEIN/) HEINRIKSON R L.
      (PARO/) PARODI L A.
PA
PΑ
      (YANR/) YAN R.
XX
PΙ
     Bienkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;
XX
     WPI; 2001-502549/55.
DR
DR
     P-PSDB; AAU06602.
XX
РΤ
     Novel purified polypeptide comprising fragment of mammalian aspartyl
PТ
     protease 2, lacking Asp2 transmembrane domain and retaining beta
PТ
     secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT
     activity.
XX
PS
     Example 2; Fig 1; 185pp; English.
XX
     The invention relates to a purified polypeptide comprising a fragment of
CC
     mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
CC
     transmembrane domain and the Asp2 protein, and where the polypeptide and
CC
CC
     the fragment retain the beta-secretase activity of the mammalian Asp2
     protein. The invention also details polynucleotides for the Asp proteins
CC
CC
     and vectors expressing them, and a polypeptide (isoform of amyloid
CC
     protein precursor (APP)) comprising the amino acid sequence of an APP or
CC
     its fragment containing an APP cleavage site recognizable by a mammalian
CC
     beta-secretase, and further comprising two lysine residues at the
CC
     carboxyl terminus of the amino acid sequence of the mammalian APP or APP
CC
     fragment. Also included in the invention are methods of identifying
```

modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are useful for treating Alzheimer's disease. APP is useful in methods for

identifying inhibitors or modulators of human Asp2 activity and amyloid-

therapeutics for the treatment or prevention of Alzheimer's disease. APP

beta (Abeta) peptide production. APP is also useful in designing

CC

CC CC

CC

```
comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
     associated with increased levels of Abeta processing is useful in assays
 CC
 CC
     relating the Alzheimer's research. The expression vector is useful for
     recombinantly expressing APP. Nucleic acids that hybridise to Asp
 CC
     oligonucleotides are useful as probes or primers. The probes are useful
 CC
     for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC
     Southern blots. The present sequence encodes human Aspl
 CC
 XX
     Sequence 1804 BP; 397 A; 520 C; 458 G; 429 T; 0 U; 0 Other;
 SQ
  Query Match
                     100.0%; Score 1804; DB 4; Length 1804;
  Best Local Similarity 100.0%; Pred. No. 0;
  Matches 1804; Conservative
                          0; Mismatches
                                        0; Indels
                                                   0; Gaps
                                                             0:
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Qу
            1 ATGGGCGCACTGGCCCGGGCGCTGCTGCTGCTGCTGCCCCAGTGGCTCCTGCGCGCC 60
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         61 GCCCGGAGCTGGCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAAC 120
Qу
           61 GCCCCGGAGCTGGCCCCTCCACGCTGCCCCTCCGGGTGGCCGCGCCACGAAC 120
Db
        121 CGCGTAGTTGCGCCCACCCCGGGACCCGGGACCCCTGCCGAGGCCCACGCCGACGGCTTG 180
Qу
            121 CGCGTAGTTGCGCCCACCCCGGGACCCGGGACCCCTGCCGAGCGCCACGCCGACGCCTTG 180
Db
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Qу
           181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCCAACTTCTTGGCCATG 240
Db
        241 GTAGACAACCTGCAGGGGGACTCTGGCCGGGGCTACTACCTGGAGATGCTGATCGGGACC 300
Qу
           241 GTAGACAACCTGCAGGGGGACTCTGGCCGGGGCTACTACCTGGAGATGCTGATCGGGACC 300
Db
        301 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
Qу
           301 CCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
Db
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Qy
           361 ACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCC 420
Db
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Qу
           Db
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Qу
           481 GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT 540
Db
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Qv
           Db
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       601 TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA 660
Qу
           601 TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA 660
Db
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QУ	841	1 TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC 90	0
Db			
QУ	901	1 ATCGTGGACAGTGGCACCACGCTGCTGCGCCCCAGAAGGTGTTTGATGCGGTGGTG 960	O
Db	901)
QУ	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 102	20
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Db	1201		0
Qу	1261	AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA 132	0
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QУ	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT 138	0
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Qу	1441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC 1500)
Db		GCCATCCTCGTGTCTTAATCGTCCTGCTGCTGCTGCTGCTGCTGGTGTCAGCGTCGCCCC 1500	

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 Qу
           Db
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Db
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Db
       Qу
           Db
Qу
       1801 AAAA 1804
           \square
Db
       1801 AAAA 1804
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    ABL52456 standard; cDNA; 1804 BP.
XX
AC
    ABL52456;
XX
DТ
    16-JUL-2002 (first entry)
XX
DE
    Human Asp-1 nucleotide sequence SEQ ID NO:1.
XX
KW
    Human; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;
    proteolytic; chromosome 21; gene; ss.
KW
XX
   Homo sapiens.
OS
XX
FH
   Key
                Location/Qualifiers
FT
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FΨ
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FТ
                /note= "aspartyl protease"
XX
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XX
PD
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XX
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XX
PR
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               99US-00404133.
PR
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PR
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PR
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PR
   06-DEC-1999;
               99US-0169232P.
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22-SEP-2000; 2000GB-00023315.
 XX
 PΑ
      (PHAA ) PHARMACIA & UPJOHN CO.
 XX
 ΡI
      Bienkowkski MJ, Gurney M;
 XX
 DR
      WPI; 2002-397167/43.
 DR
      P-PSDB; ABB78589.
 XX
     Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT
 PT
     protease activity, e.g. for the diagnosis of Alzheimer's disease.
 XX
 PS
     Claim 8; Fig 1; 182pp; English.
 XX
     The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC
 CC
     substrate (I) which comprises a peptide of no more than 50 amino acids,
     and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC
     Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC
CC
     proteolytic activity, comprising: (a) contacting a hu-Aspl protein with
CC
     (I) under acidic conditions; and (b) determining the level of hu-Aspl
     proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC
     nucleotide sequence that hybridises under stringent conditions to the non
CC
     -coding strand complementary to a defined 1804 nucleotide sequence (see
CC
     ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
CC
     proteolytic activity and lacks nucleotides encoding a transmembrane
CC
CC
     domain); (3) a purified polynucleotide (III') comprising a sequence that
     hybridises under stringent conditions to (III) (the nucleotide sequence
CC
     encodes a polypeptide further lacking a pro-peptide domain corresponding
CC
CC
     to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
CC
     comprising (III) or (III'); and (5) a host cell (V) transformed or
     transfected with (III), (III') and/or (IV). The hu-Aspl protease
CC
     substrate (I) may be used as an enzyme substrate in assays to detect
CC
CC
     aspartyl protease activity, (II) and therefore diagnose diseases
     associated with aberrant hu-Aspl expression and activity such as
CC
     Alzheimer's disease. Hu-Aspl has been localised to chromosome 21, while
CC
CC
     hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC
     sequence encodes hu-Aspl from the present invention
XX
     Sequence 1804 BP; 397 A; 520 C; 458 G; 429 T; 0 U; 0 Other;
SQ
  Query Match
                        100.0%; Score 1804; DB 6; Length 1804;
  Best Local Similarity
                        100.0%;
                                 Pred. No. 0;
  Matches 1804; Conservative
                               0; Mismatches
                                                0;
                                                    Indels
                                                             0; Gaps
Qу
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             1 ATGGGCGCACTGGCCCGGGCGCTGCTGCTGCTGCCCAGTGGCTCCTGCGCGCC 60
Db
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Qу
             Db
          61 GCCCCGGAGCTGGCCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAAC 120
Qу
         121 CGCGTAGTTGCGCCCACCCCGGGACCCCGGGACCCCTGCCGAGCGCCACGCCGACGGCTTG 180
             Db
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Qy
         181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCAACTTCTTGGCCATG 240
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PR

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Qу	541	TTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCT	600
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Qу	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
Db	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
QУ	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT	720
Db	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT	720
QУ	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA	780
Db	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA	780
Qу	781	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA	840
Db	781	GGAGACATCTGGTATACCCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA	840
Qу	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC	900
Db	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC	900
QУ	901	ATCGTGGACAGTGGCACCACGCTGCTGCCCCCAGAAGGTGTTTGATGCGGTGGTG	960
Db	901	ATCGTGGACAGTGCCACCACGCTGCCCCAGAAGGTGTTTGATGCGGTGGTG	960
QУ	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	1020
Db	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 1	1020
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Db	
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Db	
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Db	
Qу	1381 CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA 1440
Db	
Qу	1441 GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC 1500
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Qу	1681 GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC 1740
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Db	
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Db	

RESULT 8 AAZ34056

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 XX
 DT
       07-DEC-1999
                    (first entry)
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 XX
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 KW
      probe; blood coagulation disorder; cancer; cellular adhesion disorder;
 KW
      secreted protein; transmembrane protein; ss.
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PΑ
     (GETH ) GENENTECH INC.
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     Wood WI,
               Goddard A,
                            Gurney A, Yuan J, Baker KP,
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DR
     WPI; 1999-551358/46.
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     New secreted and transmembrane polypeptides and their polynucleotides,
     useful for treating blood coagulation disorders, cancers and cellular
 PT
 PT
     adhesion disorders.
 XX
     Claim 2; Fig 72; 530pp; English.
 PS
 XX
     The present invention describes secreted and transmembrane polypeptides
 CC
     and their polynucleotides. The nucleotide sequences are useful as sources
 CC
     of probes, primers, for chromosome mapping, and for generation of
 CC
 CC
     antisense sequences. They can also be used to create transgenic animals.
     The proteins can be used to treat a variety of diseases and disorders,
CC
     depending on their function. Diseases that may be treated include blood
CC
     coagulation disorders, cancers and cellular adhesion disorders. They may
CC
     also be used to raise antibodies. AAZ33891 to AAZ34338, and AAY41685 to
CC
    AAY41774 represent polynucleotide and polypeptide sequence given in the
CC
     exemplification of the present invention
CC
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    Sequence 1879 BP; 388 A; 559 C; 498 G; 434 T; 0 U; 0 Other;
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                      98.9%;
                             Score 1784.4; DB 2; Length 1879;
  Best Local Similarity
                      99.9%; Pred. No. 0;
  Matches 1785; Conservative
                            0; Mismatches
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            94 ATGGGCGCACTGGCCCGGGCGCTGCTGCTGCTCTGCTGGCCCAGTGGCTCCTGCGCGCC 153
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Qу
            154 GCCCCGGAGCTGGCCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAAC 213
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        121 CGCGTAGTTGCGCCCACCCCGGGACCCCGGGACCCCTGCCGACGCCCACGCCGACGCTTG 180
Qу
            214 CGCGTAGTTGCGCCCACCCCGGGACCCCGGGACCCCTGCCGAGCGCCACGCCGACGCTTG 273
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Qу
            Db
        274 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCCAACTTCTTGGCCATG 333
        241 GTAGACAACCTGCAGGGGGACTCTGGCCGGGGCTACTACCTGGAGATGCTGATCGGGACC 300
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            Db
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        301 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
Qу
            394 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 453
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Qy
           454 ACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCC 513
Db
Qy
        421 AAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAA 480
           514 AAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAA 573
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Db	
Qу	601 TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA 660
Db	
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Db	
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ДĀ	901 ATCGTGGACAGTGGCACCACGCTGCTGCGCCCCAGAAGGTGTTTGATGCGGTGGTG 960
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Qу	1141 ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA 1200
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Qy	1261 AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA 1320
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        1621 AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1680
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        1681 GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC 1740
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KW
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    expressed sequence tag; detection; cancer; ss.
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     WPI; 2000-611443/58.
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     Novel PRO polypeptides and polynucleotides used in detection methods, to
PT
     target bioactive molecules to specific cells, and to modulate cellular
PT
РΤ
     activities.
XX
PS
     Claim 2; Fig 72; 636pp; English.
XX
     AAC78458 to AAC78599 represent polynucleotide and EST (expressed sequence
CC
     tag) sequences which encode secreted or transmembrane PRO polypeptides.
CC
CC
     The PRO polynucleotides and polypeptides have cytostatic activity. The
     polynucleotides and polypeptides can be used for detecting the presence
CC
     of PRO polypeptides in samples, for linking bioactive molecules to cells
CC
     and for modulating biological activities of cells, using the polypeptides
CC
CC
     for specific targeting. The polypeptide targeting can be used to kill the
     target cells, e.g. for the treatment of cancers. The polypeptide pairs
CC
CC
     provide specific targeting of bioactive molecules to cells. AAC78600 to
     AAC78987 represent PCR primers and probes used in the isolation of the
CC
CC
     PRO polynucleotide sequences
XX
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    Sequence 1879 BP; 388 A; 559 C; 498 G; 434 T; 0 U; 0 Other;
  Query Match
                        98.9%; Score 1784.4; DB 3; Length 1879;
  Best Local Similarity
                        99.9%; Pred. No. 0;
 Matches 1785; Conservative
                               0; Mismatches
                                                1; Indels
                                                              0; Gaps
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Qу
             Db
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Qу
             Db
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PR

Qу	121 CGCGTAGTTGCGCCCACCCCGGGACCCCGGGACCCCTGCCGAGCGCCACGCCGACGGCTTG 180
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Qу	241 GTAGACAACCTGCAGGGGGACTCTGGCCGCGGCTACTACCTGGAGATGCTGATCGGGACC 300
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QУ	301 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
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QУ	781 GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA 840
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Qу	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT 1380
Db	1414	
QУ	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA 1440
Db	1474	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA 1533
QУ	1441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC 1500
Db	1534	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC 1593
QУ	1501	CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA 1560
Db	1594	
QУ	1561	GCCAGGCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC 1620
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QУ	1621	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1680
Db	1714	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1773
Qy	1681	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC 1740
Db	1774	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC 1833
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      18-DEC-2001
                   (first entry)
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      PRO polypeptide; mammal; tumour; cancer; human; cattle; horse; sheep; ss;
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      dog; cat; pig; goat; rabbit; tumour necrosis factor alpha; TNF-alpha;
     blood; chondrocyte cell; cell proliferation; cell differentiation; colon;
 KW
 KW
      adrenal; lung; breast; prostate; rectum; cervix; liver; genetic disorder;
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      PCR primer.
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XX
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     WO200168848-A2.
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PD
     20-SEP-2001.
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     28-FEB-2001; 2001WO-US006520.
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     30-MAY-2000; 2000WO-US014941.
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     02-JUN-2000; 2000WO-US015264.
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     05-JUN-2000; 2000US-0209832P.
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      01-DEC-2000; 2000WO-US032678.
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      20-DEC-2000; 2000WO-US034956.
 XX
 PA
      (GETH ) GENENTECH INC.
 XX
     Baker KP, Chen J, Desnoyers L, Goddard A, Godowski PJ, Gurney AL;
 PΙ
     Pan J, Smith V, Watanabe CK, Wood WI, Zhang Z;
 ΡI
 XX
 DR
     WPI; 2001-602746/68.
 DR
     P-PSDB; AAU29059.
 XX
 РΤ
     Novel nucleic acids encoding PRO polypeptides, used to diagnose the
     presence of tumors, such as prostate and breast tumors, in mammals and to
 PT
 PT
     screen for modulators of the compounds.
XX
PS
     Claim 2; Fig 71; 774pp; English.
XX
     Sequences AAS45925-AAS46231 represent DNA molecules encoding and PCR
CC
     primers for PRO polypeptides of the invention. The sequences of the
CC
     invention can be used to detect the presence of a tumour in a mammal by
CC
CC
     comparing the level of expression of a PRO polypeptide in a test sample
     of cells from the animal and a control sample of normal cells, whereby a
CC
CC
     higher level of expression in the test sample indicates the presence of a
     tumour in the mammal. Mammals include dogs, cats, cattle, horses, sheep,
CC
CC
     pigs, goats and rabbits but are preferably human. The polypeptides can be
CC
     used to stimulate tumour necrosis factor (TNF) alpha release from human
     blood, when contacted with it. A specific polypeptide can be used to
CC
     stimulate the proliferation or differentiation of chondrocyte cells. The
CC
     PRO proteins can be used to determine the presence of tumours and also
CC
     susceptibility to tumour development, particularly adrenal, lung, colon,
CC
     breast, prostate, rectal, cervical, or liver tumours, in mammalian
CC
     subjects. The oligonucleotide probes specific for the PRO nucleic acids
CC
     can be used for genetic analysis of individuals with genetic disorders
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ALIGNMENTS

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- ; TITLE OF INVENTION: THEREOF
- ; FILE REFERENCE: 29915/62801
- ; CURRENT APPLICATION NUMBER: US/09/548,372D
- ; CURRENT FILING DATE: 2000-04-12
- ; PRIOR APPLICATION NUMBER: US 60/155,493
- ; PRIOR FILING DATE: 1999-09-23
- ; PRIOR APPLICATION NUMBER: US 09/404,133
- ; PRIOR FILING DATE: 1999-09-23
- ; PRIOR APPLICATION NUMBER: PCT/US99/20881
- ; PRIOR FILING DATE: 1999-09-23

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  CURRENT APPLICATION NUMBER: US/09/548,367D
  CURRENT FILING DATE: 2000-04-12
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Db	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT	720
Qу	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA	780
Db	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA	780
Qу	781	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA	840
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; Patent No. 6500667
; GENERAL INFORMATION:
  APPLICANT: GURNEY ET AL.
  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
AND USES
  TITLE OF INVENTION: THEREOF
  FILE REFERENCE: 29915/6280L
  CURRENT APPLICATION NUMBER: US/09/551,853D
  CURRENT FILING DATE: 2000-04-18
  PRIOR APPLICATION NUMBER: US 60/155,493
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: US 09/404,133
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: PCT/US99/20881
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: US 60/101,594
  PRIOR FILING DATE: 1998-09-24
  NUMBER OF SEQ ID NOS: 73
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; SEQ ID NO 1
   LENGTH: 1804
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US-09-551-853D-1
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 Best Local Similarity 100.0%; Pred. No. 0;
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RESULT 4 US-09-215-450-18 : Sequence 18 Application

; Sequence 18, Application US/09215450

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; Patent No. 6635748
 ; GENERAL INFORMATION:
   APPLICANT: Giese, Klaus
   APPLICANT: Xin, Hong
   TITLE OF INVENTION: METASTATIC BREAST AND COLON CANCER REGULATED GENES
   FILE REFERENCE: 1451.100 / 210030.447
   CURRENT APPLICATION NUMBER: US/09/215,450
   CURRENT FILING DATE: 1998-12-17
  NUMBER OF SEQ ID NOS: 27
   SOFTWARE: FastSEQ for Windows Version 3.0
; SEO ID NO 18
   LENGTH: 1873
   TYPE: DNA
   ORGANISM: human
US-09-215-450-18
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  Best Local Similarity 99.8%; Pred. No. 0;
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 Patent No. 6025180
; GENERAL INFORMATION:
  APPLICANT: Powell, David J.
  APPLICANT: Southan, Christopher
  APPLICANT: Chapman, Conrad G.
  APPLICANT: Evans, Joanne R.
  TITLE OF INVENTION: ASP1
  FILE REFERENCE: GH70262
  CURRENT APPLICATION NUMBER: US/08/999,723A
  CURRENT FILING DATE: 1997-10-06
  NUMBER OF SEQ ID NOS: 2
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
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   ORGANISM: Homo sapiens
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  Patent No. 6162630
  GENERAL INFORMATION:
   APPLICANT: POWELL, DAVID J.
   APPLICANT: SOUTHAN, CHRISTOPHER
   APPLICANT: CHAPMAN, CONRAD G.
   APPLICANT: EVANS, JOANNE R.
   TITLE OF INVENTION: ASP1
   FILE REFERENCE: GH-70262-D1
   CURRENT APPLICATION NUMBER: US/09/434,427
   CURRENT FILING DATE: 1999-11-04
   EARLIER APPLICATION NUMBER: US 08/999,723
   EARLIER FILING DATE: 1997-10-06
   EARLIER APPLICATION NUMBER: UK 9626022.9
   EARLIER FILING DATE: 1996-12-14
   NUMBER OF SEO ID NOS: 2
   SOFTWARE: FastSEQ for Windows Version 3.0
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   TYPE: DNA
   ORGANISM: HOMO SAPIENS
US-09-434-427-1
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  Best Local Similarity
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           211 CGCGTAGTTGCGCCCACCCCGGGACCCGGGACCCCTGCCGAGCGCCACGCCGACGCCTTG 270
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        181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCAACTTCTTGGCCATG 240
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        361 ACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCC 420
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Qу	481 GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT 540
Db	
Qу	541 TTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCT 600
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QУ	601 TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA 660
Db	
Qу	661 CAAGCAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT 720
Db	
Qу	721 GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA 780
Db	
QУ	781 GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA 840
Db	
QУ	841 TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC 900
Db	
Qу	901 ATCGTGGACAGTGGCACCACGCTGCTGCGCCTGCCCCAGAAGGTGTTTGATGCGGTGGTG 960
Db	
Qу	961 GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 1020
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Qу	1021 CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC 1080
Db	
Qу	1081 TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC 1140
Db	
Qу	1141 ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA 1200
Db	
Qу	1201 TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC 1260
Db	

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          1411 GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT 1470
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      1381 CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA 1440
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          1471 CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA 1530
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      1441 GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC 1500
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      1501 CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA 1560
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          1711 AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1770
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      1741 CTCCCTACTTCCAAGAAAATAATTAAAAAAA 1772
          Db
      1831 CTCCCTACTTCCAAGAAAAAAAAAAAAAAAA 1862
RESULT 7
 APPLICANT: Giese, Klaus
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US-09-215-450-1 ; Sequence 1, Application US/09215450 ; Patent No. 6635748 ; GENERAL INFORMATION: ; APPLICANT: Giese, Klaus ; APPLICANT: Xin, Hong ; TITLE OF INVENTION: METASTATIC BREAST AND COLON CANCER REGULATED GENES ; FILE REFERENCE: 1451.100 / 210030.447 ; CURRENT APPLICATION NUMBER: US/09/215,450 ; CURRENT FILING DATE: 1998-12-17 ; NUMBER OF SEQ ID NOS: 27 ; SOFTWARE: FastSEQ for Windows Version 3.0 ; SEQ ID NO 1 ; LENGTH: 2429 ; TYPE: DNA

ORGANISM: human

US-09-215-450-1

Query Match 82.0%; Score 1478.6; DB 4; Length 2429; Best Local Similarity 99.4%; Pred. No. 0; Matches 1484; Conservative 0; Mismatches 9; Indels 0; Gaps 0; 305 CGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGAACCC 364 Qу 1 1111 213 CTCACCAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGCAGGAAACCC 272 Db 365 CGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCCAAGG 424 Qу 273 CGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCCAAGG 332 Db 425 GCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAAGACC 484 Qу 333 GCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAAGACC 392 Db 485 TCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATTTTTG 544 Qу 393 TCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATTTTTG 452 Db 545 AATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCTTATG 604 Qу 453 AATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCTTATG 512 Db 605 CCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACACAAG 664 Qy 513 CCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACACAAG 572 Db 665 CAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCTGGAT 724 Qу 573 CAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCTGGAT 632 Db 725 CTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAAGGAG 784 Qу 633 CTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAAGGAG 692 Db 785 ACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAATTGG 844 Qv 693 ACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAATTGG 752 Db 845 AAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCCATCG 904 Qу 753 AAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCCATCG 812 Db 905 TGGACAGTGGCACCACGCTGCCCCCAGAAGGTGTTTGATGCGGTGGTAGAA 964 QУ 813 TGGACAGTGGCACCACGCTGCCCCCAGAAGGTGTTTGATGCGGTGGTAGAA 872 Db 965 CTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCCCAGC 1024 Qу CTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCCCAGC 932 Db 1025 TGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATCTACC 1084 Qу 933 TGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATCTACC 992 Db 1085 TGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTACATTC 1144 Qy

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Db	1233	
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Db	1293	
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Db	1353	TCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCCCGTG 1412
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Qу	1625	GCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCTGCTC 1684
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RESULT 8

US-09-717-432-1

- ; Sequence 1, Application US/09717432
- ; Patent No. 6291223
- ; GENERAL INFORMATION:
- ; APPLICANT: ZHU, YUAN
- ; APPLICANT: LI, XIAOTONG
- ; APPLICANT: CHRISTIE, GARY
- ; APPLICANT: POWELL, DAVID J.

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TITLE OF INVENTION: Mouse Aspartic Secretase-1 (mASP1)
   FILE REFERENCE: GP-70663
  CURRENT APPLICATION NUMBER: US/09/717,432
  CURRENT FILING DATE: 2000-11-21
  PRIOR APPLICATION NUMBER: 60/166,974
  PRIOR FILING DATE: 1999-11-23
  NUMBER OF SEQ ID NOS: 2
  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1
   LENGTH: 1545
   TYPE: DNA
   ORGANISM: MUS MUSCULUS
US-09-717-432-1
  Query Match
                   62.9%; Score 1134.2; DB 3; Length 1545;
  Best Local Similarity 83.6%; Pred. No. 5.5e-260;
  Matches 1302; Conservative 0; Mismatches 243; Indels 12; Gaps
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         1 ATGGGCGCGCTGCTTCGAGCACTCTTGCTCCTGGTGCTGCGCGCAGTGGCTCTTGAGTGCG 60
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           Db
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          14 11111 11111111111 1 111
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Qу
          Db
       229 GTGGACAACCTTCAGGGGGACTCTGGCCGCGGCTACTACCTAGAGATGCTGATCGGGACC 288
       301 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
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       361 ACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCC 420
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           Db
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          409 AAGGGCTTTGATGTCACTGTGAAGTACACACAGGGAAGCTGGACTGGCTTTGTTGGTGAG 468
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       481 GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT 540
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          Db
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Db		
Qу		1 GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAACTTTCTATTA
Db		
Qу		GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTCAAA
Db		
Qу		TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCACACACA
Db		TTGGAAATTGGAGGCCAGAACCTCAACCTGGACTGCAGAGAGAG
Qу	901	ATCGTGGACAGTGGCACCACGCTGCTGCGCCCCAGAAGGTGTTTGATGCGGTGGTG 960
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Db		GAAGCTGTGGCACGAACATCTCTGATTCCAGAGTTTTCTGATGGCTTCTGGACAGGGGCC 1008
Qу	1021	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC 1080
Db	1009	CAGCTGGCATGCTGGACAAATTCTGAAACGCCATGGGCATATTTCCCTAAGATTTCTATC 1068
Qу	1081	TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC 1140
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Db		

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RESULT 9
US-09-912-484-1
 ; Sequence 1, Application US/09912484
 ; Patent No. 6358725
; GENERAL INFORMATION:
  APPLICANT: Christie, Gary
  APPLICANT: Li, Xiaotong
APPLICANT: Powell, David J.
   APPLICANT: Zhu, Yuan
   TITLE OF INVENTION: Mouse Aspartic Secretase-1 (mASP1)
   FILE REFERENCE: GP-70663-D1
   CURRENT APPLICATION NUMBER: US/09/912,484
   CURRENT FILING DATE: 2001-07-25
  PRIOR APPLICATION NUMBER: 60/166,974
  PRIOR FILING DATE: 1999-11-23
  PRIOR APPLICATION NUMBER: 09/717,432
  PRIOR FILING DATE: 2000-11-21
  NUMBER OF SEQ ID NOS: 2
  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1
   LENGTH: 1545
   TYPE: DNA
   ORGANISM: MUS MUSCULUS
US-09-912-484-1
  Query Match
                      62.9%; Score 1134.2; DB 4; Length 1545;
  Best Local Similarity 83.6%; Pred. No. 5.5e-260;
  Matches 1302; Conservative
                           0; Mismatches 243; Indels
                                                      12; Gaps
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        121 CGCGTAGTTGCGCCCACCCCGGGACCCGGGGACCCCTGCCGAGGCCCACGCCGACGGCTTG 180
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           121 CACAGAGCCTCGGCTGTTCCCGGACTCGGGACCCCCGAGTTGCCCCGGGCCGATGGTCTG 180
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Qу
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                                             1 111111111111111
Db
        181 GCCCTCGCACTGGAGCCTGTCAGGGC-----TACTGCCAACTTCTTGGCTATG 228
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        241 GTAGACAACCTGCAGGGGGACTCTGGCCGGGGCTACTACCTGGAGATGCTGATCGGGACC 300
           229 GTGGACAACCTTCAGGGGGACTCTGGCCGGGGCTACTACCTAGAGATGCTGATCGGGACC 288
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RESULT 10
US-09-280-116-32
; Sequence 32, Application US/09280116A
; Patent No. 6331427
; GENERAL INFORMATION:
  APPLICANT: Robison, Keith E.
  TITLE OF INVENTION: Nucleic Acid Molecules Encoding Human Protease Homologs
  FILE REFERENCE: 5800-24, 035800/176965
  CURRENT APPLICATION NUMBER: US/09/280,116A
  CURRENT FILING DATE: 1999-03-26
  NUMBER OF SEQ ID NOS: 268
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
   LENGTH: 2514
   TYPE: DNA
   ORGANISM: Homo sapiens
   FEATURE:
   OTHER INFORMATION: aspartyl proteases
US-09-280-116-32
 Query Match
                    61.2%;
                          Score 1104.6; DB 4; Length 2514;
 Best Local Similarity
                    92.9%;
                         Pred. No. 7.1e-253;
 Matches 1428; Conservative
                         0; Mismatches
                                      64;
                                          Indels
                                                 45:
                                                     Gaps
                                                           24;
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Qу
               213 CTCACCAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGG-AGGAACCC 271
Db
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Db	392		451
Qу	544	GAATCAGA-GAATTTCTTTTTGCCTGGGATTAAATGGAATGG	602
Db	452		511
Qy	603	TGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGAC	659
Db	512	TGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGAACAC	571
QУ	660	ACAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCC-GGCTTGCCCGTTG	718
Db	572		531
QУ	719	CTGGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTT 7	773
Db	632		591
Qу	774	GTATAAAGGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAAT 8	33
Db	692		151
Qy	834	TCTGAAATTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTA 8	84
Db	752		11
QУ	885	TAACGCAGACAAGGCCATCGTGGACAGT-GGCACCACGCTGCTGCGCCTGCCCCAG 9	139
Db	812	TAACGCAGACAAGGGCCATCGTTGGACAGTGGGCACCACGCTGCTGCGCCTTGCCCCCAG 8	71
Qy	940	AAGGTGTTTGATGCGGTGGT-GGAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTC 9	98
Db	872	AAGGTGTTTGATGCGGTGGTGGGAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTC 9	31
Qy	999	TGATGGTTTCTGGACTGGGTCCCAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTC 1	058
Db	932	TGATGGTTTCTGGACTGGGTCCCAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTC 9	91
Qy	1059	TTACTTCCCTAAAATCTCCATCTACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTAT 1	118
Db	992	TTACTTCCCTAAAATCTCCATCTACCTGAGAGACGAGAACTCCAGCAGGTCATTCCGTAT 1	051
Qу	1119	CACAATCCTGCCTCAGCTTTACATTCAGCCCATGATGGGGGCCCGGCCTGAATTATGAATG 1:	178
Db	1052		111
Qу	1179	TTACCGATTCGGCATTTCCCCATCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGA 12	238

Db	1112	
QΥ	1239	GGGCTTCTACGTCATCTTCGACAGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTG 1298
Db	1172	
Qy	1299	TGCAGAAATTGCA-GGTGCTGC-AGTGTCTGAAATTTCCGGGCCTTTCTC-AACAGAGGA 1355
Db	1232	TGCAGAAATTGCACGGTGCTGCAAGTGTCTGAAATTTCCGGGCCTTTCTCAAACAGAGGA 1291
Qу	1356	TGTAGCCAG-CAACTGTGTCCCCGCTC-AGTCTTTGAGCGA-GCCCATTTTGTGGATTGT 1412
Db	1292	TGTAGCCAGCCAACTGTGTCCCCGCTCAAGTCTTTGAGCGACGCCCCATTTTGTGGATTGT 1351
Qу	1413	GTCCTATGCGCTCATGAGCGTCTGTGG-AGCCATCCTCCTTGTC-TTAATCGTCCT 1466
Db	1352	GTCCCTATGCCGCTCAATGAAGCGTCTGTGGAAGCCATCCTTGTCGTTAATTCAGTC 1411
Qу	1467	GCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCCGTGACCCTGAGGTCGTCAATG 1522
Db	1412	GCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCCCGTGACCCTGAGGTCGTCAATG 1471
QУ	1523	ATGAGTCCTCT-GGTCAGACATCGCTGGAAATGAATAGCCAGGCCTGACCTCAAGCAA 1581
Db	1472	ATGAGTCCTCTGGGTCAGACATCGCTGGAAATGAATAGCCAGGCCTGACCTCAAGCAA 1531
QУ	1582	CCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGCAGCAGCCGGGATCGATGGTGG 1641
Db	1532	CCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGCAGCCGGGATCGATGGTGG 1591
Qу	1642	CGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCTGCTCCCAGATGCCTTCTAGAT 1701
Db	1592	CGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCTGCTCCCAGATGCCTTCTAGAT 1651
Qу	1702	TCACTGTCTTTTGATTCTTGATTTTCAAGC-TTTCAAATCCTCCCTACTTCCAAGAAAA 1760
Db	1652	TCACTGTCTTTTGATTCTTGATTTTCAAGCTTTTCAAATCCTCCCTACTTCCAAGAAAA 1711
Qу	1761	TAATTAAAAAAAAACTTCATTCTAAACCAAAAAAA 1797
Db	1712	TAATTAAAAAAAAAACTTCATTCTAAACCAAAACAGA 1748

RESULT 11

US-09-280-116-85

- ; Sequence 85, Application US/09280116A
- ; Patent No. 6331427
- ; GENERAL INFORMATION:
- ; APPLICANT: Robison, Keith E.
- ; TITLE OF INVENTION: Nucleic Acid Molecules Encoding Human Protease Homologs
- ; FILE REFERENCE: 5800-24, 035800/176965
- ; CURRENT APPLICATION NUMBER: US/09/280,116A
- ; CURRENT FILING DATE: 1999-03-26
- ; NUMBER OF SEQ ID NOS: 268
- ; SOFTWARE: PatentIn Ver. 2.0
- ; SEQ ID NO 85

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   LENGTH: 1021
   TYPE: DNA
   ORGANISM: Homo sapiens
   FEATURE:
   OTHER INFORMATION: aspartyl proteases
   FEATURE:
   NAME/KEY: misc feature
   LOCATION: (1)..(1021)
   OTHER INFORMATION: n = a, t, c or g
US-09-280-116-85
 Query Match
                   52.9%; Score 953.6; DB 4; Length 1021;
 Best Local Similarity 98.8%; Pred. No. 3.7e-217;
 Matches 971; Conservative
                        0; Mismatches
                                        Indels
                                                2: Gaps
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        98 TCCGGGTGGCCGCGCCACGAACCGCGTAGTTGCGCCCACCCGGGACCCGGGACCCCTG 157
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          38 TCCGGGTGGCCGCGCCACGAACCGCGTAGTTGCGCCCACCCCGGGACCCGGGAGCCCTG 97
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       158 CCGAGCGCCACGCCGACGCCTTGGCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGG 217
Qу
          98 CCGAGCGCCACGCCGACGCTNGGCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGG 157
Db
       218 GCGCCGCCAACTTCTTGGCCATGGTAGACAACCTGCAGGGGGACTCTGGCCGCGGCTACT 277
Qу
          Db
       158 GCGCCGCCAACTTCTTGGCCATGGTAGACAACCTGCAGGGGGGACTCTGGCCGCGGCTACT 217
       278 ACCTGGAGATGCTGATCGGGACCCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAA 337
Qy
          218 ACCTGGAGATGCTGATCGGGACCCCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAA 277
Db
       338 GCAGTAACTTTGCCGTGGCAGGAACCCCGCACTCCTACATAGACACGTACTTTGACACAG 397
Qy
          278 GCAGTAACTTTGCCGTGGCAGGAACCCCGCACTCCTACATAGACACGTACTTTGACACAG 337
Db
       398 AGAGGTCTAGCACATACCGCTCCAAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAA 457
Qу
          338 AGAGGTCTAGCACATACCGCTCCAAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAA 397
Db
       458 GCTGGACGGCTTCGTTGGGGAAGACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTT 517
Qу
          398 GCTGGACGGCTTCGTTGGGGAAGACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTT 457
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       518 TTCTTGTCAACATTGCCACTATTTTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAAT 577
Qу
          458 TTCTTGTCAACATTGCCACTATTTTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAAT 517
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           Db
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       818 ACTACCAGATAGAAATTCTGAAATTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCA 877
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           Db
       758 ACTACCAGATAGAAATTCTGAAATTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCA 817
       878 GAGAGTATAACGCAGACAAGGCCATCGTGGACAGTGGCACCACGCTGCTGCCCC 937
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          Db
       818 GAGAGTATAACGCAGACAAGGCCATCGTGGACAGTGGCACCACGCTGCTGCGCCTGCCCC 877
       938 AGAAGGTGTTTGATGC--GGTGGTGGAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATT 995
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          Db
       878 AGAAGGTGTTTGATGCCGGTGGTGGAAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATT 937
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       996 CTCTGATGGTTTCTGGACTGGGTCCCAGCTGGCGTGCTGGACGAATTCGGAAACACCTTG 1055
          938 CTCTGATGGTTTCTGGACTGGGTCCCACTTGGCGTGCTGGACGAATTCGGAAACACCTTG 997
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      1056 GTCTTACTTCCCTAAAATCTCCA 1078
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          998 GTCTTACTTCCCTAAAATCTTCA 1020
RESULT 12
US-09-724-566A-42
; Sequence 42, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
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- APPLICANT: Anderson, John P.
- APPLICANT: Basi, Gurigbal
- APPLICANT: Doane, Minh Tam
- APPLICANT: Frigon, No. 6627739mand
- APPLICANT: John, Varghese
- APPLICANT: Power, Michael
- APPLICANT: Sinha, Sukanto
- APPLICANT: Tatsuno, Gwen
- APPLICANT: Tung, Jay
- APPLICANT: Wang, Shuwen
- APPLICANT: McConlogue, Lisa
- TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
- TITLE OF INVENTION: Methods
- FILE REFERENCE: 228-US-NEWC2
- CURRENT APPLICATION NUMBER: US/09/724,566A
- CURRENT FILING DATE: 2000-11-28
- PRIOR APPLICATION NUMBER: US 09/501,708
- PRIOR FILING DATE: 2000-02-10
- PRIOR APPLICATION NUMBER: 60/119,571
- PRIOR FILING DATE: 1999-02-10
- PRIOR APPLICATION NUMBER: 60/139,172
- PRIOR FILING DATE: 1999-06-15
- NUMBER OF SEQ ID NOS: 104
- SOFTWARE: FastSEQ for Windows Version 4.0
- ; SEQ ID NO 42

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TYPE: DNA
   ORGANISM: Homo sapiens
US-09-724-566A-42
                  22.0%; Score 397.4; DB 4; Length 2348;
 Query Match
 Best Local Similarity 55.0%; Pred. No. 7.1e-85;
 Matches 863; Conservative 0; Mismatches 676; Indels 30; Gaps
         2 TGGGCGCACTGGCCGGGCGCTGCTGCTGCTGCTGGCCCAGTGGCTCCTGCGCGCCG 61
Qy
          238 TGGGGGCAGGCCCAGGGACGGACGTGGGCCAGTGCGAGGCCCAGAGGCCCGAAGGCCGG 297
Db
        62 CCCCGGAGCTGGCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAACC 121
Qу
           Db
       298 GGCCCACCATGGCCCAAGCCCTGCCCTGGCTCCTGCTGGATGGGCGCGGGAGTGCTGC 357
       122 GCGTAGTTGCGCCCACCCCGGGACCCGGGACCCCTGCCGAGCGCCACGCCGACGGCTTGG 181
Qу
           358 CTGCCCACGGCACCCAGCACGGCATCCGGCTGCCCCTGCGCAGCGGCCTGGGGGGGCCCC 417
Db
       182 CGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCGC----- 224
Qу
          418 CCCTGGGGCTGCCCCGGGAGACCGACGAAGAGCCCGAGGAGCCCGGCCGGAGGG 477
Db
Qу
       225 -CAACTTCTTGGCCATGGTAGACAACCTGCAGGGGGGACTCTGGCCGGGCTACTACCTGG 283
           Db
       478 GCAGCTTTGTGGAGATGGTGGACAACCTGAGGGGCAAGTCGGGGCCAGGGCTACTACGTGG 537
Qу
       284 AGATGCTGATCGGGACCCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTA 343
          Db
       538 AGATGACCGTGGGCAGCCCCCGCAGACGCTCAACATCCTGGTGGATACAGGCAGCAGTA 597
       344 ACTTTGCCGTGGCAGGAACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGT 403
QУ
          Db
       598 ACTTTGCAGTGGGTGCTGCCCCCACCCCTTCCTGCATCGCTACTACCAGAGGCAGCTGT 657
Qy
       404 CTAGCACATACCGCTCCAAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGA 463
          Db
       658 CCAGCACATACCGGGACCTCCGGAAGGGTGTGTATGTGCCCTACACCCAGGGCAAGTGGG 717
       464 CGGGCTTCGTTGGGGAAGACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTG 523
Qу
           718 AAGGGAGCTGGGCACCTGGTAAGCATCCCCCATGGCCCCAACGTCACTGTGCGTG 777
Db
       524 TCAACATTGCCACTATTTTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATG 583
Qу
           778 CCAACATTGCTGCCATCACTGAATCAGACAAGTTCTTCATCAACGGCTCCAACTGGGAAG 837
Db
       584 GAATACTTGGCCTAGCTTATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCT 643
Qу
          Db
       838 GCATCCTGGGGCTGGCCTATGCTGAGATTGCCAGGCCTGACGACTCCCTGGAGCCTTTCT 897
       644 TCGACTCCCTGGTGACACAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAG 703
Qу
          Db
       898 TTGACTCTCTGGTAAAGCAGACCCACGTTCCCAACCTCTTCTCCCTGCAGCTTTGTGGTG 957
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LENGTH: 2348

Qy	704	CCGGCTTGCCCGTTGCTGGATCTGGGACCAACGGAGGTAGTCTTGTCTT	754
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Qу	755	GTGGAATTGAACCAAGTTTGTATAAAGGAGACATCTGGTATACCCCTATTAAGGAAGAGT	814
Db	1018		1077
Qу	815	GGTACTACCAGATAGAAATTCTGAAATTGGAAATTGGAGGCCAAAGCCTTAATCTGGACT	874
Db	1078		1137
QУ	875	GCAGAGAGTATAACGCAGACAAGGCCATCGTGGACAGTGGCACCACGCTGCTGC	934
Db	1138		1197
QУ	935	CCCAGAAGGTGTTTGATGCGGTGGTGGAAGCTGTGGCCCGCGCATCTCTGATTCCAGAAT	994
Db	1198		1257
QУ	995	TCTCTGATGGTTTCTGGACTGGGTCCCAGCTGGCGTGCTGGACGAATTCGGAAACACCTT	1054
Db	1258		1317
QУ	1055	GGTCTTACTTCCCTAAAATCTCCATCTACCTGAGAGATGAGAACTCCAGCAGGTCATTCC	1114
Db	1318		1377
Qy	1115	GTATCACAATCCTGCCTCAGCTTTACATTCAGCCCATGATGGGGGCCGGCC	1171
Db	1378	GCATCACCATCCTTCCGCAGCAATACCTGCGGCCAGTGGAAGATGTGGCCACGTCCCAAG	1437
Qу	1172	ATGAATGTTACCGATTCGGCATTTCCCCATCCACAAATGCGCTGGTGATCGGTGCCACGG	1231
Db	1438	ACGACTGTTACAAGTTTGCCATCTCACAGTCATCCACGGGCACTGTTATGGGAGCTGTTA	1497
Qy	1232	TGATGGAGGGCTTCTACGTCATCTTCGACAGAGCCCAGAAGAGGGTGGGCTTCGCAGCGA	1291
Db	1498	TCATGGAGGCTTCTACGTTGTCTTTGATCGGGCCCGAAAACGAATTGGCTTTGCTGTCA	1557
QУ	1292	GCCCCTGTGCAGAAATTGCAGGTGCTGCAGTGTCTGAAATTTCCGGGCCTTTCTCAACAG	1351
Db	1558	GCGCTTGCCATGTGCACGATGAGTTCAGGACGGCAGCGGTGGAAGGCCCTTTTGTCACCT	1617
Qy	1352	AGGATGTAGCCAGCAACTGTGTCCCCGCTCAGTCTTTGAGCGAGC	1411
Db	1618	TGGACATGGAAGACTGTGGCTACAACATTCCACAGACAGA	1677
ДĀ	1412	TGTCCTATGCGCTCATGAGCGTCTGTGGAGCCATCCTCCTTGTCTTAATCGTCCTGCTGC	1471
Db	1678	TAGCCTATGTCATGGCTGCCATCTGCGCCCTCTTCATGCTGCCACTCTGCCTCATGGTGT	1737
Qу	1472	TGCTGCCGTTCCGGTGTCAGCGTCGCCCCGTGACCCTGAGGTCGTCAATGATGAGTCCT	1531
Db	1738	GTCAGTGGCGCTGCCTGCCCTGCGCCAGCAGCATGATGACTTTGCTGATGACATCT	1797
QУ	1532	CTCTGGTCA 1540	

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RESULT 13
US-09-724-566A-44
; Sequence 44, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
  APPLICANT: Anderson, John P.
  APPLICANT: Basi, Guriqbal
  APPLICANT: Doane, Minh Tam
  APPLICANT: Frigon, No. 6627739mand
  APPLICANT: John, Varghese
  APPLICANT: Power, Michael
  APPLICANT: Sinha, Sukanto
  APPLICANT: Tatsuno, Gwen
  APPLICANT: Tung, Jay
  APPLICANT: Wang, Shuwen
  APPLICANT: McConlogue, Lisa
  TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
  TITLE OF INVENTION: Methods
  FILE REFERENCE: 228-US-NEWC2
  CURRENT APPLICATION NUMBER: US/09/724,566A
  CURRENT FILING DATE: 2000-11-28
  PRIOR APPLICATION NUMBER: US 09/501,708
  PRIOR FILING DATE: 2000-02-10
  PRIOR APPLICATION NUMBER: 60/119,571
  PRIOR FILING DATE: 1999-02-10
  PRIOR APPLICATION NUMBER: 60/139,172
  PRIOR FILING DATE: 1999-06-15
  NUMBER OF SEQ ID NOS: 104
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 44
   LENGTH: 2348
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-724-566A-44
 Query Match
                       22.0%; Score 397.4; DB 4; Length 2348;
 Best Local Similarity 55.0%; Pred. No. 7.1e-85;
 Matches 863; Conservative
                            0; Mismatches 676; Indels
          2 TGGGCGCACTGGCCGGGCGCTGCTGCTGCCTGCTGGCCCAGTGGCTCCTGCGCGCCG 61
Qу
            1 1 1
         238 TGGGGGCAGGCCCAGGGACGTGGGCCAGTGCGAGGCCCAGAGGCCCGAAGGCCGG 297
Db
         62 CCCCGGAGCTGGCCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAACC 121
Qу
                    1 1
         298 GGCCCACCATGGCCCAAGCCCTGCCCTGGCTCCTGCTGTGGATGGGCGCGGGAGTGCTGC 357
Db
        122 GCGTAGTTGCGCCCACCCCGGGACCCGGGGACCCCTGCCGAGCGCCACGCCGACGGCTTGG 181
Qу
                  11 1 1
                                1 11 11
                                                Db
        358 CTGCCCACGGCACCCAGCACGGCATCCGGCTGCCCCTGCGCAGCGGCCTGGGGGGGCGCCC 417
        182 CGCTCGCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCCC----- 224
Qу
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Db	418	CCCTGGGGCTGCCCCGGGAGACCGACGAAGAGCCCGAGGAGCCCGGCCGGAGGG	477
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Db	478		537
Qу	284	AGATGCTGATCGGGACCCCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTA	343
Db	538	AGATGACCGTGGGCAGCCCCCGCAGACGCTCAACATCCTGGTGGATACAGGCAGCAGTA	597
QУ	344	ACTTTGCCGTGGCAGGAACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGT	403
Db	598	ACTTTGCAGTGGGTGCTGCCCCCCACCCCTTCCTGCATCGCTACTACCAGAGGCAGCTGT	657
QУ	404	CTAGCACATACCGCTCCAAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGA	463
Db	658		717
Qу	464	CGGGCTTCGTTGGGGAAGACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTG	523
Db	718	AAGGGGAGCTGGCACCTGGTAAGCATCCCCCATGGCCCCAACGTCACTGTGCGTG	777
Qу	524	TCAACATTGCCACTATTTTTGAATCAGAGAATTTCTTTTTTGCCTGGGATTAAATGGAATG	583
Db	778	CCAACATTGCTGCCATCACTGAATCAGACAAGTTCTTCATCAACGGCTCCAACTGGGAAG	837
Qy	584	GAATACTTGGCCTAGCTTATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCT	643
Db	838	GCATCCTGGGGCTGGCCTATGCTGAGATTGCCAGGCCTGACGACTCCCTGGAGCCTTTCT	897
Qy	644	TCGACTCCCTGGTGACACAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAG	703
Db	898	TTGACTCTCTGGTAAAGCAGACCCACGTTCCCAACCTCTTCTCCCTGCAGCTTTGTGGTG	957
QУ		CCGGCTTGCCCGTTGCTGGATCTGGGACCAACGGAGGTAGTCTTGTCTT	
Db		CTGGCTTCCCCCTCAACCAGTCTGAAGTGCTGGCCTCTGTCGGAGGGAG	
QУ		GTGGAATTGAACCAAGTTTGTATAAAGGAGACATCTGGTATACCCCTATTAAGGAAGAGT	
Db		GAGGTATCGACCACTCGCTGTACACAGGCAGTCTCTGGTATACACCCATCCGGCGGGAGT	
Qу		GGTACTACCAGATAGAAATTCTGAAATTGGAAATTGGAGGCCAAAGCCTTAATCTGGACT	
Db		GGTATTATGAGGTGATCATTGTGCGGGTGGAGATCAATGGACAGGATCTGAAAATGGACT	
QУ		GCAGAGAGTATAACGCAGACAAGGCCATCGTGGACAGTGGCACCACGCTGCTGCGCCTGC	
Db		GCAAGGAGTACAACTATGACAAGAGCATTGTGGACAGTGGCACCACCAACCTTCGTTTGC	1197
QУ		CCCAGAAGGTGTTTGATGCGGTGGTGGAAGCTGTGGCCCGCGCATCTCTGATTCCAGAAT	
Db		CCAAGAAAGTGTTTGAAGCTGCAGTCAAATCCATCAAGGCAGCCTCCTCCACGGAGAAG1	
QУ		TCTCTGATGGTTTCTGGACTGGGTCCCAGCTGGCGTGCTGGACGAATTCGGAAACACCTT	
Db	1258	TCCCTGATGGTTTCTGGCTAGGAGAGCAGCTGGTGTGCTGGCAAGCAGCACCACCCCTT	1317

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1055 GGTCTTACTTCCCTAAAATCTCCATCTACCTGAGAGATGAGAACTCCAGCAGGTCATTCC 1114
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      Db
      QУ
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Db
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           11111
      1738 GTCAGTGGCGCTGCCTCCGCTGCCCAGCAGCATGATGACTTTGCTGATGACATCT 1797
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QУ
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Db
RESULT 14
US-09-724-566A-48
; Sequence 48, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
  APPLICANT: Anderson, John P.
  APPLICANT: Basi, Guriqbal
  APPLICANT: Doane, Minh Tam
  APPLICANT: Frigon, No. 6627739mand
  APPLICANT: John, Varghese
  APPLICANT: Power, Michael
  APPLICANT: Sinha, Sukanto
  APPLICANT: Tatsuno, Gwen
  APPLICANT:
          Tung, Jay
  APPLICANT: Wang, Shuwen
  APPLICANT: McConlogue, Lisa
  TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
  TITLE OF INVENTION: Methods
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FILE REFERENCE: 228-US-NEWC2

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CURRENT APPLICATION NUMBER: US/09/724,566A
 CURRENT FILING DATE: 2000-11-28
  PRIOR APPLICATION NUMBER: US 09/501,708
  PRIOR FILING DATE: 2000-02-10
 PRIOR APPLICATION NUMBER: 60/119,571
  PRIOR FILING DATE: 1999-02-10
  PRIOR APPLICATION NUMBER: 60/139,172
  PRIOR FILING DATE: 1999-06-15
  NUMBER OF SEQ ID NOS: 104
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 48
   LENGTH: 16080
   TYPE: DNA
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Expression Vector pCEK
   FEATURE:
   NAME/KEY: misc feature
  LOCATION: (1)...(16080)
  OTHER INFORMATION: n = A, T, C or G
US-09-724-566A-48
 Query Match 22.0%; Score 397.4; DB 4; Length 16080; Best Local Similarity 55.0%; Pred. No. 1.5e-84;
 Matches 863; Conservative 0; Mismatches 676; Indels 30; Gaps
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Qу
           1607 TGGGGGCAGGCCCAGGGACGGACGTGGGCCAGTGCGAGCCCAGAGGCCCGAAGGCCGG 1666
Db
         62 CCCCGGAGCTGGCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAACC 121
Qу
             1667 GGCCCACCATGGCCCAAGCCCTGCCCTGGCTCCTGCTGTGGATGGGCGCGGGAGTGCTGC 1726
Db
        122 GCGTAGTTGCGCCCACCCCGGGACCCGGGACCCCTGCCGAGCGCCACGCCGACGGCTTGG 181
Qу
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; GENERAL INFORMATION:
 APPLICANT: Anderson, John P.
 APPLICANT: Basi, Guriqbal
 APPLICANT: Doane, Minh Tam
 APPLICANT: Frigon, No. 6627739mand
 APPLICANT: John, Varghese
 APPLICANT: Power, Michael
 APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
 APPLICANT: Tung, Jay
 APPLICANT: Wang, Shuwen
 APPLICANT: McConlogue, Lisa
 TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
 TITLE OF INVENTION: Methods
 FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
 CURRENT FILING DATE: 2000-11-28
 PRIOR APPLICATION NUMBER: US 09/501,708
 PRIOR FILING DATE: 2000-02-10
 PRIOR APPLICATION NUMBER: 60/119,571
 PRIOR FILING DATE: 1999-02-10
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 PRIOR FILING DATE: 1999-06-15
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Best Local Similarity 55.6%; Pred. No. 2.2e-84;
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OM nucleic - nucleic search, using sw model

Run on: March 5, 2004, 23:19:02; Search time 654 Seconds

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ALIGNMENTS

RESULT 1 US-09-794-927-1

- ; Sequence 1, Application US/09794927; Patent No. US20010016324A1
- ; GENERAL INFORMATION:
- ; APPLICANT: Gurney, Mark E.

```
APPLICANT: Bienkowski, Michael J.
  APPLICANT: Heinrikson, Robert L.
  APPLICANT: Parodi, Luis A.
  APPLICANT: Yan, Rigiang
  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
  TITLE OF INVENTION: USES
  TITLE OF INVENTION: THEREFOR
  FILE REFERENCE: 28341/6280FG
  CURRENT APPLICATION NUMBER: US/09/794,927
  CURRENT FILING DATE: 2001-02-27
  PRIOR APPLICATION NUMBER: 09/416,901
  PRIOR FILING DATE: 1999-10-13
  PRIOR APPLICATION NUMBER: 60/155,493
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 09/404,133
  PRIOR FILING DATE: 1999-09-23
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  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 60/101,594
  PRIOR FILING DATE: 1998-09-24
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US-09-795-847-1

- ; Sequence 1, Application US/09795847
- ; Patent No. US20010018208A1
- GENERAL INFORMATION:
- APPLICANT: Gurney, Mark E.
- APPLICANT: Bienkowski, Michael J.
- APPLICANT: Heinrikson, Robert L.
- APPLICANT: Parodi, Luis A.
- APPLICANT: Yan, Rigiang
- TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
- TITLE OF INVENTION: USES

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TITLE OF INVENTION: THEREFOR
  FILE REFERENCE: 28341/6280DE
  CURRENT APPLICATION NUMBER: US/09/795,847
  CURRENT FILING DATE: 2001-02-28
  PRIOR APPLICATION NUMBER: 09/416,901
  PRIOR FILING DATE: 1999-10-13
  PRIOR APPLICATION NUMBER: 60/155,493
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 09/404,133
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: PCT/US99/20881
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 60/101,594
  PRIOR FILING DATE: 1998-09-24
  NUMBER OF SEQ ID NOS: 73
  SOFTWARE: PatentIn Ver. 2.0
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   LENGTH: 1804
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-795-847-1
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Db	481	GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT	540
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Qу	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT	720
Db	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCT	720
Qу	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA	780
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RESULT 3

US-09-794-743-1

- ; Sequence 1, Application US/09794743
- ; Patent No. US20010021391A1
- ; GENERAL INFORMATION:
- APPLICANT: Gurney, Mark E.

 APPLICANT: Bienkowski, Michael J.

 APPLICANT: Heinrikson, Robert L.

 APPLICANT: Parodi Luis A
- APPLICANT: Parodi, Luis A.
- APPLICANT: Yan, Rigiang
- TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
- TITLE OF INVENTION: USES
- TITLE OF INVENTION: THEREFOR
- FILE REFERENCE: 28341/6280BC
- CURRENT APPLICATION NUMBER: US/09/794,743
- CURRENT FILING DATE: 2001-02-27
- PRIOR APPLICATION NUMBER: 09/416,901
- PRIOR FILING DATE: 1999-10-13
- PRIOR APPLICATION NUMBER: 60/155,493

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PRIOR FILING DATE: 1999-09-23
   PRIOR APPLICATION NUMBER: 09/404,133
   PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: PCT/US99/20881
   PRIOR FILING DATE: 1999-09-23
   PRIOR APPLICATION NUMBER: 60/101,594
   PRIOR FILING DATE: 1998-09-24
  NUMBER OF SEQ ID NOS:
  SOFTWARE: PatentIn Ver. 2.0
 SEQ ID NO 1
   LENGTH: 1804
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-794-743-1
  Query Match
                    100.0%;
                          Score 1804;
                                    DB 9;
                                          Length 1804;
  Best Local Similarity
                    100.0%; Pred. No. 0;
 Matches 1804; Conservative
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RESULT 4
US-09-794-748-1
; Sequence 1, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
  APPLICANT: Gurney, Mark E.
  APPLICANT: Bienkowski, Michael J.
  APPLICANT: Heinrikson, Robert L.
  APPLICANT:
           Parodi, Luis A.
  APPLICANT:
           Yan, Rigiang
  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
AND
  TITLE OF INVENTION: USES
  TITLE OF INVENTION: THEREFOR
  FILE REFERENCE: 28341/6280JL
  CURRENT APPLICATION NUMBER: US/09/794,748
  CURRENT FILING DATE: 2001-02-27
  PRIOR APPLICATION NUMBER: 09/416,901
  PRIOR FILING DATE: 1999-10-13
  PRIOR APPLICATION NUMBER: 60/155,493
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 09/404,133
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: PCT/US99/20881
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PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1998-09-24

PRIOR APPLICATION NUMBER: 60/101,594

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NUMBER OF SEQ ID NOS: 73
  SOFTWARE: PatentIn Ver. 2.0
 SEQ ID NO 1
   LENGTH: 1804
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-794-748-1
                   100.0%; Score 1804; DB 9; Length 1804;
  Query Match
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 1804; Conservative
                         0; Mismatches
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Db	1021		1080
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Qγ	1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA	1200
Db	1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGCCA	1200
Qу	1201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC	1260
Db	1201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC	1260
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            Db
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            Db
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       1801 AAAA 1804
RESULT 5
US-09-794-925-1
; Sequence 1, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
 APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
 APPLICANT: Heinrikson, Robert L.
  APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Rigiang
  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
AND USES
  TITLE OF INVENTION: THEREFOR
  FILE REFERENCE: 28341/6280HI
  CURRENT APPLICATION NUMBER: US/09/794,925
  CURRENT FILING DATE: 2001-02-27
  PRIOR APPLICATION NUMBER: 09/416,901
  PRIOR FILING DATE: 1999-10-13
  PRIOR APPLICATION NUMBER: 60/155,493
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 09/404,133
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: PCT/US99/20881
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 60/101,594
  PRIOR FILING DATE: 1998-09-24
  NUMBER OF SEQ ID NOS: 73
  SOFTWARE: PatentIn Ver. 2.0
 SEQ ID NO 1
   LENGTH: 1804
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-794-925-1
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Query Match 100.0%; Score 1804; DB 9; Length 1804; Best Local Similarity 100.0%; Pred. No. 0; Matches 1804; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Matches	180	4; Conservative	0;	Mismatches	0;	Indels	0;	Gaps	0;
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Qy	61	GCCCGGAGCTGGCCCCCG	GCGC(CCTTCACGCTGCCC	CTCCG	GGTGGCCGC	GGCCA	ACGAAC	120
Db	61	GCCCGGAGCTGGCCCCC	ccc	CCTTCACGCTGCCC	CTCCG	GGTGGCCGC	GGCC	ACGAAC	120
Qу	121	CGCGTAGTTGCGCCCACCC							180
Db	121	CGCGTAGTTGCGCCCACCC	CGG	GACCCGGGACCCCT	GCCGA	GCGCCACGC	CGAC	GCTTG	180
QУ	181	GCGCTCGCCCTGGAGCCTG							240
Db	181	GCGCTCGCCCTGGAGCCTG	CCCI	rGGCGTCCCCGCG	GGCGC	CGCCAACTTC	CTTGG	SCCATG	240
QУ	241	GTAGACAACCTGCAGGGGG	ACTO	CTGGCCGCGGCTACT	FACCT	GGAGATGCTG	SATCO	GGACC	300
Db	241	GTAGACAACCTGCAGGGG	ACTO	CTGGCCGCGGCTACT	FACCT	GGAGATGCT	ATC	GGACC	300
QУ		CCCCGCAGAAGCTACAGA	1111			1111111111	1111	11111	
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QУ	361	ACCCCGCACTCCTACATAG							420
Db		ACCCCGCACTCCTACATAG	ACAC	GTACTTTGACACAC	GAGAG	GTCTAGCACA	TACC	GCTCC	
Qу		AAGGGCTTTGACGTCACAG	$\Pi\Pi$	****		111111111	1111	11111	
Db		AAGGGCTTTGACGTCACAG							
Qу		GACCTCGTCACCATCCCCA	$\Pi\Pi$		1111	1111111111	1111	11111	
Db		GACCTCGTCACCATCCCCA							540
QУ		TTTGAATCAGAGAATTTCT	1111	11111111111111	$\Box\Box\Box$	111111111	1111	11111	600
Db		TTTGAATCAGAGAATTTCT'							
QУ		TATGCCACACTTGCCAAGC		111111111111	1111	111111111	1111		
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Qу		CAAGCAAACATCCCCAACG'		11111111111111	1111		1111	11111	
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QУ		GGATCTGGGACCAACGGAG(111111111111111	+111		I + I + I	11111	
Db		GGATCTGGGACCAACGGAG(GTAG	TCTTGTCTTGGGTG	GAATT	rgaaccaagt	TTGT.	ATAAA	
Qу	781	GGAGACATCTGGTATACCC	CTAT	TAAGGAAGAGTGGT	'ACTA	CCAGATAGAA	ATTC'	TGAAA	840

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901 961 961		960
961 961	ATCGTGGACAGTGGCACCACGCTGCTGCGCCCCAGAAGGTGTTTGATGCGGTGGTG GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	
961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	
		1020
1021		1020
1021	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC	1080
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L081	TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC	1140
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1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA	1200
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.201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC	1260
.201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC	1260
.261	AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA	1320
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321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT	1380
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441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC	1500
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RESULT 6
US-09-681-442-1
; Sequence 1, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
  APPLICANT: Gurney, Mark E.
  APPLICANT: Bienkowski, Michael J.
  APPLICANT: Heinrikson, Robert L.
  APPLICANT: Parodi, Luis A.
  APPLICANT: Yan, Riqiang
  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
AND USES
  TITLE OF INVENTION: THEREFOR
  FILE REFERENCE: 28341/6280FG
  CURRENT APPLICATION NUMBER: US/09/681,442
  CURRENT FILING DATE: 2001-04-05
  PRIOR APPLICATION NUMBER: 09/416,901
  PRIOR FILING DATE: 1999-10-13
  PRIOR APPLICATION NUMBER: 60/155,493
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 09/404,133
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: PCT/US99/20881
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 60/101,594
  PRIOR FILING DATE: 1998-09-24
  NUMBER OF SEQ ID NOS: 73
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
   LENGTH: 1804
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-681-442-1
 Query Match
                     100.0%; Score 1804; DB 9; Length 1804;
 Best Local Similarity
                     100.0%; Pred. No. 0;
 Matches 1804; Conservative
                          0; Mismatches
                                        0; Indels
                                                     0; Gaps
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Qу
           Db
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D	b 61	GCCCGGAGCTGGCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGCCACGAAC	120
Q	y 121	CGCGTAGTTGCGCCCACCCCGGGACCCGGGACCCCTGCCGAGCGCCACGCCGACGGCTTG	180
D	b 121	CGCGTAGTTGCGCCCACCCCGGGACCCGGGGACCCCTGCCGACGCCCACGCCGACGCCTTG	180
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D	o 181	GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCAACTTCTTGGCCATG	240
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Qу	781	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA	840
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Qу	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC	900
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Qу	901	ATCGTGGACAGTGGCACCACGCTGCTGCGCCTGCCCAGAAGGTGTTTGATGCGGTGGTG	960

Db	901		960
Qу	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	1020
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US-09-869-414-1
; Sequence 1, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
  APPLICANT: Beinkowski et al.
  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
AND USES
  TITLE OF INVENTION: THEREFOR
  FILE REFERENCE: 28341/6280M
  CURRENT APPLICATION NUMBER: US/09/869,414
  CURRENT FILING DATE: 2001-06-27
  PRIOR APPLICATION NUMBER: 09/416,901
  PRIOR FILING DATE: 1999-10-13
  PRIOR APPLICATION NUMBER: 60/155,493
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 09/404,133
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: PCT/US99/20881
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 60/101,594
  PRIOR FILING DATE: 1998-09-24
  NUMBER OF SEQ ID NOS: 73
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
   LENGTH: 1804
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-869-414-1
 Query Match
                     100.0%; Score 1804; DB 10; Length 1804;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 1804; Conservative 0; Mismatches
                                          0; Indels
                                                      0; Gaps
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        121 CGCGTAGTTGCGCCCACCCCGGGACCCCGGGACCCCTGCCGAGCGCCACGCCGACGCCTTG 180
QУ
           121 CGCGTAGTTGCGCCCACCCCGGGACCCCGGGACCCCTGCCGAGCGCCACGCCGACGCCTTG 180
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           181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCCAACTTCTTGGCCATG 240
Db
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Db	301		360
Qу	361	ACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGGTCTAGCACATACCGCTCC	420
Db	361		420
QУ	421	AAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAA	480
Db	421		480
QУ	481	GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT	540
Db	481		540
QУ	541	TTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCT	600
Db	541		600
QУ	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
Db	601		660
QУ	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT	720
Db	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCT	720
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Qу	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC	900
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Qy	901	ATCGTGGACAGTGGCACCACGCTGCTGCGCCCAGAAGGTGTTTGATGCGGTGGTG	960
Db	901	ATCGTGGACAGTGCCACCACGCTGCCCCCAGAAGGTGTTTGATGCGGTGGTG	960
Qу	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	1020
Db	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	1020
QУ	1021	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC	1080
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Qу	1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA	1200
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Qу	1441	GCCATCCTTGTCTTAATCGTCCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC	1500
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Qу	1681	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC	1740
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RESULT 8

US-09-548-366-1

- ; Sequence 1, Application US/09548366; Publication No. US20030104365A1
- ; GENERAL INFORMATION:

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APPLICANT: Gurney, Mark E.
  APPLICANT: Bienkowski, Michael J.
   APPLICANT: Heinrikson, Robert L.
  APPLICANT: Parodi, Luis A.
  APPLICANT: Yan, Rigiang
  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
AND
  TITLE OF INVENTION: USES THEREFOR
  FILE REFERENCE: 28341/6280A
  CURRENT APPLICATION NUMBER: US/09/548,366
  CURRENT FILING DATE: 2000-04-12
   PRIOR APPLICATION NUMBER: 60/155,493
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 09/404,133
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: PCT/US99/20881
  PRIOR FILING DATE: 1999-09-23
  PRIOR APPLICATION NUMBER: 60/101,594
  PRIOR FILING DATE: 1998-09-24
  NUMBER OF SEQ ID NOS: 65
  SOFTWARE: PatentIn Ver. 2.0
 SEO ID NO 1
   LENGTH: 1804
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-548-366-1
 Query Match
                     100.0%; Score 1804; DB 10; Length 1804;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 1804; Conservative
                         0; Mismatches
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        121 CGCGTAGTTGCGCCCACCCCGGGACCCGGGGACCCCTGCCGAGCGCCACGCCGACGGCTTG 180
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        181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCCAACTTCTTGGCCATG 240
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           181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCCAACTTCTTGGCCATG 240
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        301 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
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Qу
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Qy	421	AAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAA	480
Db	421		. 480
Qу	481	GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT	540
Db	481	GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT	540
Qу	541	TTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCT	600
Db	541		600
Qу	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
Db	601		660
Qу	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCC	720
Db	661		720
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Qу	901	ATCGTGGACAGTGGCACCACGCTGCCGCCTGCCCCAGAAGGTGTTTGATGCGGTGGTG	960
Db	901	ATCGTGGACAGTGGCACCACGCTGCCCCCAGAAGGTGTTTGATGCGGTGGTG	960
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Db	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	1020
Qу	1021	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC	1080
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Qy	1081	TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC	1140
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Qγ	1201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC	1260
Db	1201		1260

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Db	1261	AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA	1320
Qу	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT	1380
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Qу	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1440
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RESULT 9

US-09-978-295A-195

- ; Sequence 195, Application US/09978295A
- ; Patent No. US20020156006A1
- ; GENERAL INFORMATION:
- ; APPLICANT: Ashkenazi, Avi
- ; APPLICANT: Baker Kevin P.
- ; APPLICANT: Botstein, David
- ; APPLICANT: Desnoyers, Luc
- ; APPLICANT: Eaton, Dan
- ; APPLICANT: Ferrara, Napoleon
- ; APPLICANT: Filvaroff, Ellen
- ; APPLICANT: Fong, Sherman
- ; APPLICANT: Gao, Wei-Qiang
- ; APPLICANT: Gerber, Hanspeter

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APPLICANT: Gerritsen, Mary E.
  APPLICANT: Goddard, Audrey
  APPLICANT: Godowski, Paul J.
  APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J
; APPLICANT: Kljavin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James;
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
  APPLICANT: Shelton, David L.
  APPLICANT: Stewart, Timothy A.
  APPLICANT: Tumas, Daniel
  APPLICANT: Williams, P. Mickey
  APPLICANT: Wood, William I.
   TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
  TITLE OF INVENTION:
                      Acids Encoding the Same
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  CURRENT APPLICATION NUMBER: US/09/978,295A
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  PRIOR FILING DATE: 2001-07-30
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   PRIOR FILING DATE: 1998-05-15
   PRIOR APPLICATION NUMBER: 60/085697
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- ; Patent No. US20020169284A1
- ; GENERAL INFORMATION:
- ; APPLICANT: Ashkenazi, Avi
- ; APPLICANT: Baker Kevin P.
- APPLICANT: Botstein, David

- APPLICANT: Botstein, David
 APPLICANT: Desnoyers, Luc
 APPLICANT: Eaton, Dan
 APPLICANT: Ferrara, Napoleon
 APPLICANT: Filvaroff, Ellen
 APPLICANT: Fong, Sherman
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 APPLICANT: Gerber, Hanspeter

- APPLICANT: Gerritsen, Mary E.
- APPLICANT: Goddard, Audrey
- ; APPLICANT: Godowski, Paul J.
- ; APPLICANT: Grimaldi, J. Christopher
- ; APPLICANT: Gurney, Austin L.
- ; APPLICANT: Hillan, Kenneth J
- ; APPLICANT: Kljavin, Ivar J.
- ; APPLICANT: Kuo, Sophia S.
- ; APPLICANT: Napier, Mary A.
- ; APPLICANT: Pan, James;
- ; APPLICANT: Paoni, Nicholas F.
- ; APPLICANT: Roy, Margaret Ann
- ; APPLICANT: Shelton, David L.
- ; APPLICANT: Stewart, Timothy A.

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APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
 TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630P1C27
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CURRENT FILING DATE: 2001-10-16
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- APPLICANT: Ashkenazi, Avi
- APPLICANT: Baker Kevin P.
- APPLICANT: Botstein, David
- APPLICANT: Desnoyers, Luc
- APPLICANT: Eaton, Dan
- APPLICANT: Ferrara, Napoleon
- APPLICANT: Filvaroff, Ellen
- APPLICANT: Fong, Sherman
- APPLICANT: Gao, Wei-Qiang
- APPLICANT: Gerber, Hanspeter
- APPLICANT: Gerritsen, Mary E.
- APPLICANT: Goddard, Audrey
- APPLICANT: Godowski, Paul J.
- APPLICANT: Grimaldi, J. Christopher
- APPLICANT: Gurney, Austin L.
- APPLICANT: Hillan, Kenneth J
- APPLICANT: Kljavin, Ivar J.
- APPLICANT: Kuo, Sophia S. APPLICANT: Napier, Mary A.
- APPLICANT: Pan, James;
- APPLICANT: Paoni, Nicholas F.
- APPLICANT: Roy, Margaret Ann
- APPLICANT: Shelton, David L.
- APPLICANT: Stewart, Timothy A.
- APPLICANT: Tumas, Daniel
- APPLICANT: Williams, P. Mickey
- APPLICANT: Wood, William I.
- TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
- TITLE OF INVENTION: Acids Encoding the Same
- FILE REFERENCE: P2630P1C9
- CURRENT APPLICATION NUMBER: US/09/978,192A
- CURRENT FILING DATE: 2001-10-15
- PRIOR APPLICATION NUMBER: 09/918585
- PRIOR FILING DATE: 2001-07-30
- PRIOR APPLICATION NUMBER: 60/062250
- PRIOR FILING DATE: 1997-10-17
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; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
  APPLICANT: Ferrara, Napoleon
  APPLICANT: Filvaroff, Ellen
   APPLICANT: Fong, Sherman
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J
  APPLICANT: Kljavin, Ivar J.
  APPLICANT: Kuo, Sophia S.
  APPLICANT: Napier, Mary A.
  APPLICANT: Pan, James;
  APPLICANT: Paoni, Nicholas F.
  APPLICANT: Roy, Margaret Ann
  APPLICANT: Shelton, David L.
  APPLICANT: Stewart, Timothy A.
  APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
  APPLICANT: Wood, William I.
  TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
  TITLE OF INVENTION: Acids Encoding the Same
  FILE REFERENCE: P2630P1C63
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  CURRENT FILING DATE: 2001-10-24
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US-09-978-189-195

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- ; Publication No. US20030004102A1
- ; GENERAL INFORMATION:
- ; APPLICANT: Ashkenazi, Avi
- ; APPLICANT: Baker Kevin P.
- ; APPLICANT: Botstein, David
- ; APPLICANT: Desnoyers, Luc
- ; APPLICANT: Eaton, Dan
- ; APPLICANT: Ferrara, Napoleon
- ; APPLICANT: Filvaroff, Ellen
- ; APPLICANT: Fong, Sherman ; APPLICANT: Gao, Wei-Qiang

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APPLICANT: Gerber, Hanspeter
  APPLICANT: Gerritsen, Mary E.
  APPLICANT: Goddard, Audrey
  APPLICANT: Godowski, Paul J.
  APPLICANT: Grimaldi, J. Christopher
  APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J
; APPLICANT: Kljavin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
  APPLICANT: Pan, James;
  APPLICANT: Paoni, Nicholas F.
  APPLICANT: Roy, Margaret Ann
  APPLICANT: Shelton, David L.
  APPLICANT: Stewart, Timothy A.
  APPLICANT:
              Tumas, Daniel
  APPLICANT:
              Williams, P. Mickey
  APPLICANT: Wood, William I.
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 TITLE OF INVENTION: Acids Encoding the Same
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PRIOR FILING DATE: 1998-05-13

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Qу	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC 9	00
Db	934	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC 9	93
Qу	901	ATCGTGGACAGTGGCACCACGCTGCTGCCCCAGAAGGTGTTTGATGCGGTGGTG 9	60
Db	994	ATCGTGGACAGTGGCACCACGCTGCTGCCCCAGAAGGTGTTTGATGCGGTGGTG 1	053
QУ	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 1	020
Db	1054	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC 1	113
Qу	1021	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC 1	080
Db	1114	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC 1:	173
Qу	1081	TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC 1	140
Db	1174	TACCTGAGAGACGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC 12	233
Qy	1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA 12	200
Db	1234		293
Qу	1201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC 12	260
Db	1294		353
Qy	1261	AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA 13	320
Db	1354		13
QУ	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT 13	
Db			

QУ	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1440
Db	1474	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1533
QУ	1441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC	1500
Db	1534	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCCGCTTCCGGTGTCAGCGTCGCCCC	1593
Qу	1501	CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA	1560
Db	1594	CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA	1653
QУ	1561	GCCAGGCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC	1620
Db	1654	GCCAGGCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC	1713
QУ	1621	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT	1680
Db	1714	AGCAGCCGGGATCGATGGCGCGTTTCTCTCTGTGCCCACCCGTCTTCAATCTCTGTTCT	1773
Qу	1681	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC	1740
Db	1774	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTTTCAAGCTTTCAAATC	1833
Qy	1741	CTCCCTACTTCCAAGAAAATAATTAAAAAAAAAACTTCATTCTAA 1786	
Db	1834	CTCCCTACTTCCAAGAAAATAATTAAAAAAAAAACTTCATTCTAA 1879	

US-09-978-608A-195

- ; Sequence 195, Application US/09978608A
- ; Publication No. US20030045462A1
- ; GENERAL INFORMATION:
- ; APPLICANT: Ashkenazi, Avi
- APPLICANT: Ashkenazi, Avi
 APPLICANT: Baker Kevin P.
 APPLICANT: Botstein, David
 APPLICANT: Desnoyers, Luc
 APPLICANT: Eaton, Dan
 APPLICANT: Ferrara, Napoleon
 APPLICANT: Filvaroff, Ellen
 APPLICANT: Fong, Sherman
 APPLICANT: Gao Wei-Clang

- APPLICANT: Gao, Wei-Qiang
- APPLICANT: Gerber, Hanspeter
- APPLICANT: Gerritsen, Mary E.
- ; APPLICANT: Goddard, Audrey
- APPLICANT: Godowski, Paul J.
- ; APPLICANT: Grimaldi, J. Christopher
- APPLICANT: Gurney, Austin L.
- ; APPLICANT: Hillan, Kenneth J
- ; APPLICANT: Kljavin, Ivar J.
- ; APPLICANT: Kuo, Sophia S.
- ; APPLICANT: Napier, Mary A.
- ; APPLICANT: Pan, James;
- ; APPLICANT: Paoni, Nicholas F.
- ; APPLICANT: Roy, Margaret Ann
- ; APPLICANT: Shelton, David L.

```
APPLICANT:
            Stewart, Timothy A.
  APPLICANT:
            Tumas, Daniel
  APPLICANT:
            Williams, P. Mickey
  APPLICANT: Wood, William I.
  TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
  TITLE OF INVENTION: Acids Encoding the Same
  FILE REFERENCE: P2630P1C22
  CURRENT APPLICATION NUMBER: US/09/978.608A
  CURRENT FILING DATE: 2001-10-16
  NUMBER OF SEQ ID NOS: 624
; Prior Application removed - See File Wrapper or Palm
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   LENGTH: 1879
   TYPE: DNA
   ORGANISM: Homo sapien
US-09-978-608A-195
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                           Score 1784.4; DB 10; Length 1879;
 Best Local Similarity
                    99.9%;
                          Pred. No. 0;
 Matches 1785; Conservative
                          0; Mismatches
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                                           Indels
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                                                      Gaps
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         94 ATGGGCGCACTGGCCCGGGCGCTGCTGCTGCTGCTGCCCAGTGGCTCCTGCGCGCC 153
         61 GCCCCGGAGCTGGCCCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGCCCACGAAC 120
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           154 GCCCGGAGCTGGCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGGCCACGAAC 213
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        121 CGCGTAGTTGCGCCCACCCCGGGACCCGGGGACCCCTGCCGAGGGCCACGCCGACGGCTTG 180
Qу
           214 CGCGTAGTTGCGCCCACCCCGGGACCCCGGGACCCCTGCCGAGGCCCACGCCGACGGCTTG 273
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        181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCAACTTCTTGGCCATG 240
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           274 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCCAACTTCTTGGCCATG 333
Db
        241 GTAGACAACCTGCAGGGGGACTCTGGCCGGGGCTACTACCTGGAGATGCTGATCGGGACC 300
Qу
           334 GTAGACAACCTGCAGGGGGACTCTGGCCGGGGCTACTACCTGGAGATGCTGATCGGGACC 393
Db
        301 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
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           394 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 453
Db
       361 ACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCC 420
Qу
           Db
       454 ACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCC 513
       421 AAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAA 480
Qу
           514 AAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAA 573
Db
       481 GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT 540
Qу
           574 GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT 633
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Qу	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
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Qу	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT	720
Db	754		813
Qy	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA	780
Db	814		873
Qу	781	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA	840
Db	874		933
QУ	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC	900
Db	934		993
Qу	901	ATCGTGGACAGTGGCACCACGCTGCTGCGCCCAGAAGGTGTTTGATGCGGTGGTG	960
Db	994		1053
Qу	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	1020
Db	1054		1113
Qу	1021	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC	1080
Db	1114		1173
QУ	1081	TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC	1140
Db	1174		1233
Qу	1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA	1200
Db	1234		1293
Qу	1201	TCCACAAATGCGCTGGTGATCGGTGCCACGGTGATGGAGGGCTTCTACGTCATCTTCGAC	1260
Db	1294		1353
Qу	1261	AGAGCCCAGAAGAGGGTGGGCTTCGCAGCGAGCCCCTGTGCAGAAATTGCAGGTGCTGCA	1320
Db	1354		1413
Qу	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT	1380
Db	1414		1473
Qу	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1440

Db	1474	
Qу	1441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC 1500
Db	1534	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC 1593
QУ	1501	CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA 1560
Db	1594	CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA 1653
Qу	1561	GCCAGGCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC 1620
Db	1654	GCCAGGCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC 1713
Qу	1621	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1680
Db	1714	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1773
Qу	1681	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC 1740
Db	1774	GCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCTTTCAAATC 1833
ДУ	1741	CTCCCTACTTCCAAGAAAAATAATTAAAAAAAAAACTTCATTCTAA 1786
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US-09-978-585A-195

- ; Sequence 195, Application US/09978585A
- ; Publication No. US20030049633A1
- ; GENERAL INFORMATION:
- ; APPLICANT: Ashkenazi, Avi

- APPLICANT: Baker Kevin P.
 APPLICANT: Botstein, David
 APPLICANT: Desnoyers, Luc
 APPLICANT: Eaton, Dan
 APPLICANT: Ferrara, Napoleon
- APPLICANT: Filvaroff, Ellen
- APPLICANT: Fong, Sherman
- APPLICANT: Gao, Wei-Qiang
- APPLICANT: Gerber, Hanspeter
- APPLICANT: Gerritsen, Mary E.
- APPLICANT: Goddard, Audrey
- APPLICANT: Godowski, Paul J.
- ; APPLICANT: Grimaldi, J. Christopher
- ; APPLICANT: Gurney, Austin L.
- ; APPLICANT: Hillan, Kenneth J
- ; APPLICANT: Kljavin, Ivar J.
- APPLICANT: Kuo, Sophia S.
- APPLICANT: Napier, Mary A.
- APPLICANT: Pan, James;
- ; APPLICANT: Paoni, Nicholas F.
- ; APPLICANT: Roy, Margaret Ann
- ; APPLICANT: Shelton, David L.
- ; APPLICANT: Stewart, Timothy A.

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APPLICANT: Tumas, Daniel
  APPLICANT: Williams, P. Mickey
  APPLICANT: Wood, William I.
  TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
  TITLE OF INVENTION: Acids Encoding the Same
  FILE REFERENCE: P2630P1C15
  CURRENT APPLICATION NUMBER: US/09/978,585A
  CURRENT FILING DATE: 2001-10-16
  NUMBER OF SEQ ID NOS: 624
 Prior Application removed - See File Wrapper or Palm
 SEQ ID NO 195
   LENGTH: 1879
   TYPE: DNA
   ORGANISM: Homo sapien
US-09-978-585A-195
  Query Match
                     98.9%; Score 1784.4; DB 10; Length 1879;
  Best Local Similarity 99.9%; Pred. No. 0;
 Matches 1785; Conservative
                         0; Mismatches
                                        1; Indels
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Qy
           94 ATGGGCGCACTGGCCCGGGCGCTGCTGCTGCCTCTGCTGGCCCAGTGGCTCCTGCGCGCC 153
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         61 GCCCCGGAGCTGGCCCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGCCACGAAC 120
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        154 GCCCCGGAGCTGGCCCCCGCGCCCTTCACGCTGCCCCTCCGGGTGGCCGCGCCACGAAC 213
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Db
        181 GCGCTCGCCCTGGAGCCTGCCCTGGCGTCCCCCGCGGGCGCCCAACTTCTTGGCCATG 240
Ov
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        301 CCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAGGA 360
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           454 ACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCGCTCC 513
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           514 AAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGGAA 573
Db
       481 GACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTTGTCAACATTGCCACTATT 540
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       541 TTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATGGAATGGAATACTTGGCCTAGCT 600
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QУ	601	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	660
Db	694	TATGCCACACTTGCCAAGCCATCAAGTTCTCTGGAGACCTTCTTCGACTCCCTGGTGACA	753
QУ	661	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCCGTTGCT	720
Db	754	CAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTGGAGCCGGCTTGCCT	813
QУ	721	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA	780
Db	814	GGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAA	873
QУ	781	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA	840
Db	874	GGAGACATCTGGTATACCCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAA	933
QУ	841	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC	900
Db	934	TTGGAAATTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCC	993
QУ	901	ATCGTGGACAGTGGCACCACGCTGCTGCGCCCAGAAGGTGTTTGATGCGGTGGTG	960
Db	994	ATCGTGGACAGTGGCACCACGCTGCTGCGCCCAGAAGGTGTTTGATGCGGTGGTG	1053
ДÀ	961	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	1020
Db	1054	GAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACTGGGTCC	1113
QΆ	1021	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC	1080
Db	1114	CAGCTGGCGTGCTGGACGAATTCGGAAACACCTTGGTCTTACTTCCCTAAAATCTCCATC	1173
Qу		TACCTGAGAGATGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC	
Db	1174	TACCTGAGAGACGAGAACTCCAGCAGGTCATTCCGTATCACAATCCTGCCTCAGCTTTAC	1233
Qу	1141	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA	1200
Db	1234	ATTCAGCCCATGATGGGGGCCGGCCTGAATTATGAATGTTACCGATTCGGCATTTCCCCA	1293
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ДÀ	1321	GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT	1380
Db		GTGTCTGAAATTTCCGGGCCTTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCT	
Qу	1381	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA	1440

Db	1474	CAGTCTTTGAGCGAGCCCATTTTGTGGATTGTGTCCTATGCGCTCATGAGCGTCTGTGGA 1533
QУ	1441	GCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTCAGCGTCGCCCC 1500
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Db	1594	CGTGACCCTGAGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATA 1653
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Db	1714	AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCCACCCGTCTTCAATCTCTGTTCT 1773
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Qу	1741	CTCCCTACTTCCAAGAAAAAAAAAAAAAAAAAAAAAAAA
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